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637. VERs Under Imperfect Competition and Foreign Direct Investment: A Case Study of the U.S.-Japan Auto VER

Jaime de Melo and David Tarr

Protection of domestic industries through nontariff barriers generally produces unintended effects. The developments that followed the agreement between the United States and Japan on autos demonstrate the complexity of the voluntary export restraint mechanism.

In 1981, the United States induced the Japanese to agree to a voluntary export restraint (VER) on their exports of autos to the United States. Using a general equilibrium constant return to scale model, de Melo and Tarr first assess the costs of the U.S.-Japan agreement at about $10 billion.

The two countries negotiated the VER against a background of failing U.S. production and employment in the auto industry and several legislative attempts to curb Japanese imports. The Japanese agreed to limit their U.S. exports to 1.68 million vehicles a year for a three-year period.

The study found that U.S. auto dealers captured some of the rents from the VER and that increasing returns to scale in the U.S. auto industry imply that protection has an effect on scale efficiency.

From 1984 to 1987, seven Japanese auto manufacturing firms established assembly plants in the United States. De Melo and Tarr argue that the VER generated pure profits in the domestic auto industry which induced the Japanese producers to enter the U.S. domestic market through foreign direct investment. Their entry then largely eliminated the abnormally high profits.

The study sequentially introduces into the model the important elements of the auto industry and the VER, thereby isolating the impact of each on the estimates of the welfare effects of the VER. In the most reasonable representation with increasing returns to scale, pure profits, internationally mobile capital, and endogenous conjectures, the estimate of the welfare costs of the VER are $9 billion; this is $1 billion or 10 percent less than the estimate from the constant returns to scale model.

The impact of foreign direct investment was to lower the costs of the VER because the greater entry into domestic auto manufacturing resulted in a lower quota rent premium for foreign autos. The costs per job protected in the auto sector, at the expense of employment elsewhere, were high, ranging from $164,000 to $296,000 a job a year.

This paper — a product of the Trade Policy Division, Country Economics Department — is part of a larger effort in PRE to understand the effects of trade policy on industrial efficiency. Copies are availabe free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Dawn Ballantyne, room N10-033, extension 37947 (42 pages).

668. Inflation Tax and Deficit Financing in Egypt

Hinh T. Dinh and Marcelo Giugale

Egypt is able to exact an exceptionally high inflation tax without causing high inflation because of the private sector's large financial holdings. Causes for these large holdings are complex and include money illusion, foreign exchange restrictions, and financial repression. Because of the reliance on the inflation tax — which makes Egypt's overall tax regime fairly regressive — any liberalization of financial markets would put pressure on domestic prices, if the underlying budget deficit cannot adjust fast enough.

Although Egypt's budget deficit is far above the level found in other low-middle-income countries, the inflation rate in Egypt has never been very high. This is because the country has managed to finance these budget deficits by resorting to an inflation tax that, at 11 percent of GDP in 1987, constitutes a large share of total tax revenues. By contrast, conventional tax revenues come to only 17 percent of GDP.

Dinh and Giugale report a large, underlying inflation-tax base — from which the Egyptian government has collected substantial revenues — that exists because of money balances held willingly or unwillingly by the private sector. Egyptians have opted to hold underperforming domestic currency deposits for a variety of reasons: restrictions on domestic residents' freedom to legally convert Egyptian pounds into U.S. dollars; a limited black market; high insurance costs for the average investor of maintaining assets in other forms, such as gold; and a mild money illusion in the early 1980s.

The authors find that the private business sector, with a net borrowing position of 14 percent of GDP, has benefited from the inflation tax. Households, on the other hand, pay more of the inflation tax than other sectors, turning over 8 percent of GDP to the government this way. This compares with 0.5 percent of GDP that households pay in income tax. Although income tax in Egypt is fairly progressive, the greater reliance on the inflation tax makes Egypt's overall tax structure fairly regressive.

Dinh and Giugale argue that —

- Money illusion cannot last forever — if inflation begins to increase, Egyptian households will ultimately move out of underperforming domestic assets, creating strains on the banking system.
- If foreign exchange and interest rate controls are lifted — as part of an adjustment program, for instance — and if the budget deficit fails to adjust fast enough, the large base for the inflation tax will disappear, leading to a rise in inflation rates to near Latin American levels.
- Understanding the role and size of the inflation tax in Egypt will help in determining the sequencing and equity aspects of any future reform program.
- The financial side cannot continue to bear the burden for the real side; Egypt must move swiftly to cut its budget deficit, the underlying cause of its dependence on the inflation tax.

This paper is a product of the Country Operations Division, Country Department III, Europe, Middle East, and North Africa Regional Office. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Luqui Santano, room D7-039, extension 80553 (29 pages, with tables).

669. Are High Real Interest Rates Bad for World Economic Growth?

Nemat Shafik and Jalaleddin Jalali

The conventional wisdom says yes. But close examination suggests the answer is not nearly so clear-cut.

There is a conventional perception that high real interest rates are bad for economic growth. However, Shafik and Jalali show that close examination of the experionce over the last 40 years undermines he existence of such a relationship. For much of the 1950-79 period, ex-post real interest rates were less than the growth rate of income in the major economies, whereas the 1980s were a period of rapid growth in the world economy that coincided with unprecedentedly high real in-:rest rates.

Shafik and Jalali review the competing explanations for the high real interest rates of the 1980s. These explanations include the U.S. budget deficit, restrictive monetary policies in the OECD, a decline in global savings, a boom in investment, and higher risk premia. The merits of each explanation are reviewed in light of the empirical evidence.

The authors stress that the critical uestion is whether real interest rates ave had an adverse effect on economic growth, not why they have been high in the recent past. To test this, the literature on cointegration is used to explore whether world interest rates and growth rates equilibrate in the long run. The econometric evidence disputes the view that high interest rates are associated with low economic growth in the industrial countries. This would seem to support the view that the high interest rates that prevailed during the 1980s were the result of increased profitability or improved investment efficiency.

For the low- and middle-income countries, the relationship between interest rates and growth is ambiguous. High real interest rates will probably adversely affect developing countries that are highly indebted at variable interest rates and those that need to borrow further. However, developing countries that are outward-oriented may be able to profit from increased exports as a result of rapid growth in the industrial countries.

What does this analysis imply for the consequences of high real interest rates in he future? One implication is that high real interest rates may not matter for growth performance if more productive investment results. If there is a negative impact of higher interest rates on growth, it will probably affect developing countries more. This is not simply because the low- and middle-income countries are net debtors; it seems also to reflect the differing structural characteristics of industrial and developing economies. Further research might consider the role of human capital and institutional constraints in determining the ambiguous relationship between world interest rates and growth in the developing countries.

This paper — a product of the International Economic Analysis and Prospects Division, International Economics Department — is part of a larger effort in PRE to understand the linkages between the world economy and the development process. This paper was written as background to a larger report by the International Economics Department entitled *Global Economic Prospects and the Developing Countries.*. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Mila Divino, room S8-218, extension 33739 (33 pages, with figures and tables).

670. Inflation Adjustments of Financial Statements: Application of International Accounting Standard 29

Yaaqov Goldschmidt and Jacob Yaron

A framework for applying International Accounting Standard 29 to adjust the financial statements of revenue-earning enterprises operating in inflationary economies.

The Bank's draft Operational Directive on Financial Sector Operations requires the adjustment of financial statements in countries where the cumulative inflation rate over three years approaches or exceeds 100 percent. Financial statements in those countries are to follow the accounting principles in International Accounting Standard 29 (IAS 29) of the International Accounting Standards Committee.

IAS 29 provides a list of principles and requirements but does not outline the procedure for measuring income. Nor does it provide a numerical example.

This paper provides a framework for applying IAS 29 to adjust financial statements accompanied by numerical examples and thus may be considered as an extension of the standard.

This paper — a product of the Agricultural Policies Division, Agriculture and Rural Development Department — is part of a larger effort in PRE to provide guidance on the design of financial institutions and on their management practices. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cicely Spooner, room N8-035, extension 30464 (54 pages).

671. Lessons from the Heterodox Stabilization Programs

Miguel A. Kiguel and Nissan Liviatan

Heterodox stabilization programs are more successful in chronic high inflation countries because only there can the benefits from achieving a rapid initial reduction in inflation outweigh the costs of tampering with price and wage controls. While the heterodox phase is effective in blocking inflation initially, success depends on a long-term commitment to the orthodox part of the program and the readiness to accept the unavoidable costs of disinflation.

This paper draws lessons on the advantages and disadvantages of the heterodox stabilization approach in chronic high inflation countries. Heterodox stabilization programs make *temporary* use of income policies — price and wage controls — to support orthodox policies. The evaluation is based on heterodox programs — successful and unsuccessful ones — from the 1960s and 1980s in Latin American countries and Israel.

Orthodox stabilization programs normally involve a tight fiscal policy, a fixed exchange rate, and sometimes tight monetary policy. The programs have proved their worth under different conditions, including low and moderate inflation (Costa Rica and the Philippines in the early 1980s) and hyperinflation (Bolivia in 1985). The orthodox approach has been less successful in chronic high inflation countries — as demonstrated by Mexico's experience in 1982-83, where a drastic reduction in the budget deficit was accompanied by a large increase in inflation.

Kiguel and Liviatan argue that inflationary rigidities, in an economy with chronic high inflation, can be quickly overcome by using income policies. Their main role is to deal with pessimistic expectations about inflation in situations where the government announces and makes a fiscal adjustment, but private agents do not fully believe it and set prices accordingly.

Heterodox programs were successfully tried in two chronic high inflation countries, Israel's program of 1985 and Mexico's Pacto de Solidaridad of 1987-88. In both cases these programs were followed by a second, more orthodox stage and included the use of the exchange rate as the nominal anchor. While the programs succeeded, both experienced costs in the form of an appreciation of the real exchange rate and high real interest rates.

The main lessons from the experiences analyzed by Kiguel and Liviatan are:

- The initial, rapid reduction in inflation (which usually comes about with small costs) at the beginning of heterodox programs is the easy part; the difficult part is to maintain price stability over time.
- Income policies in heterodox stabilization programs are only justified in high chronic inflation countries (countries with annual rates of inflation above 100 percent) where inflationary persistence is more pervasive and problematic.
- There is a case for a larger fiscal adjustment in heterodox programs than in orthodox programs because of the risk that a government that starts with price controls could be confused with one that tries to achieve price stability without adjusting.
- A heterodox program that fails is likely to lead to larger inflation instability than an orthodox program that fails.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a larger effort in PRE to examine stabilization policies. It was funded by the research project "Stopping High Inflation" (RPO 674-24). Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Emily Khine, room N11-061, extension 39361 (40 pages).

672. The Macroeconomics of Public Sector Deficits: The Case of Ghana

Roumeen Islam and Deborah L. Wetzel

In developing countries, fiscal policy — in particular, the reduction of public sector deficits — has been a key element of stabilization and adjustment programs. An empirical analysis of fiscal deficits in Ghana, where they have been a prominent feature, reveals their significant effects on both the real and financial sides of the economy.

Ghana's economic program after independence emphasized public investment and spending as the road to growth, a strategy that led to recurring fiscal deficits and declining growth. By 1983, per capita income was 10 percent lower than in 1957. Since the 1984 Economic Recovery Program, Ghana's fiscal deficits have declined and the public sector has been rationalized. Average growth rates have become positive.

Islam and Wetzel provide two different definitions of the fiscal deficit in Ghana. The first, more conventional approach aggregates the components of the public sector, including the central government, the social security and national insurance trust, state-owned enterprises, and the cocoa marketing board. However, because of the lack of data, this method of treating the deficit may understate its true value.

The second way looks at the total financing flows to the public sector. Data on the central government debt are supplemented with data on the claims of the central bank and banking system against state-owned enterprises and data on public external debt.

Islam and Wetzel examine the ways Ghana chose to finance its deficits and how these affected the financial side of the economy. They find that before implementation of the adjustment program of 1983, the government relied mainly on money creation for financing, though this was more by default than by choice since external lending was unavailable until 1984. This policy led to high inflation, negative real interest rates, an overvalued currency, and the emergence of black markets. These forces further eroded the tax base and ultimately increased the deficit.

The authors also find that high levels of inflation, combined with government restrictions on private currency holdings, affect the demand for assets in Ghana, leading to a Laffer curve effect in government seigniorage: After a certain point, an increase in the inflation rate actually causes a reduction in seigniorage revenue. Yet given the government's dependence on monetary finance, reduced seigniorage meant more money creation and higher inflation.

According to Islam and Wetzel:

- The fiscal deficit has had only little effect on private consumption; lagged consumption and disposable income were more important.
- Public sector investment in Ghaa has mostly substituted for private investment. The current program of divestiture of state-owned enterprises should lead to an increase in private investment.
- The fiscal deficit had a significan negative effect on the external side. The official real exchange rate tended to appreciate, the trade balance worsened, and the black market premium rose.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a PRE research project on "The Macroeconomics of the Public Sector Deficit" (RPO 675-31). Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Raquel Luz, room N11-057, extension 34303 (170 pages, with figures and tables).

673. The Macroeconomics of Public Sector Deficits: The Case of Pakistan

Nadeem U. Haque and Peter Montiel

Pakistan's fiscal deficit remains high because of the government's inability to mobilize new resources or to cut current expenditures. Yet, unlike other developing countries with high fiscal deficits, Pakistan has experienced neither hyperinflation nor debt rescheduling. This can be attributed to high growth and to the availability of concessional external financing and domestic nonbank borrowing.

For almost 20 years, Pakistan's fiscal deficit — at about 7 percent of GNP — averaged nearly twice the level for Asian countries as a whole. Although other countries with high fiscal deficits — in Latin America, for instance — have typically experienced serious growth, inflation, and current account problems, Pakistan has not. In recent years the inflation rate has been 5 percent, economic growth has averaged 7 percent a year, and the current account has either been in surplus or registered manageable deficits.

Haque and Montiel examine the causes of Pakistan's fiscal deficits. As in many other countries, public enterprise investment spending (financed by external development funds) during the early to mid-1970s became a fixture of the economy, while sufficient revenues could not be generated through taxes or returns on public investments. Public sector wages and salaries, as well as higher defense spending in the late 1970s, added to the burden. But the most important contribution to the fiscal deficits came from public sector interest payments. To keep inflation in check and to tap remittance flows, Pakistan resorted to nonbank borrowing, but the rising stock of internal debt led to higher interest rates, exacerbating the fiscal deficit.

The authors also examine why, despite these deficits, the country's macroeconomic performance has been surprisingly good. The equilibrium deficit is estimated to have been quite high for Pakistan in recent years (about 5.5 percent of GNP), despite a low inflation rate, because of a very high underlying rate of growth of real output (about 6 percent a year). This allowed a fairly rapid expansion of debt without recourse to inflationary finance. Pakistan was also able to borrow both domestically and abroad at below-market rates, including recycled petrodollars from Middle East oil producers after 1973.

To gain additional insight into the role of fiscal deficit in Pakistan, Haque and Montiel analyze how alternative fiscal policies would have affected the country's economic performance during the 1980s. They find that:

- Reducing the deficit by cutting public expenditure could have had a favorable effect on the trade balance, but at a cost to economic growth and with few price payoffs.
- Increasing tax revenues could achieve a similar external adjustment while reducing the output cost, but price problems might arise.
- Altering the composition of deficit financing would have predictable results —shifting to more money financing would mean higher prices, lower interest rates, and higher growth.

The authors conclude that finding alternative modes of deficit financing will become more urgent. Not only will continued concessional financing depend on the vagaries of the world oil market, but the accumulation of domestic debt and the higher cost of borrowing at home will require lower primary deficits. But they warn that if Pakistan turns to money financing, its macroeconomic performance would likely begin to resemble that of other high-deficit developing countries.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a PRE research project, The Macroeconomics of the Public Sector Deficit (RPO 675-31). Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Raquel Luz, room N11-057, extension 34303 (63 pages, with charts and figures).

674. Distributional Effects of Adjustment Policies: Simulations for Two Archetype Economies

Francois Bourguignon, Jaime de Melo, and Akiko Suwa

Macroeconomic crises in the 1980s made it more difficult to design policies to alleviate poverty because of the need to stabilize the economy and promote restructuring that would ensure long-term growth.

The 1980s was a period of external shocks for developing countries, and domestic macroeconomic imbalance and structural inefficiencies compounded the effects. But the performance of developing countries was not uniform.

The authors devised a model for simulating the effects of terms of trade and interest rate shocks on two archetype economies, one representing an average Latin American economy, and the other an average African economy.

The study examined the effects of the shocks and of different adjustment policies. Identical shocks and adjustment packages yield different outcomes for growth, poverty, and income distribution in the two economies.

The simulations suggest three important conclusions:

- With the standard adjustment package, inequality increased significantly for the Latin American archetype but decreased significantly for the African archetype.

This happened for two reasons. In the Latin American archetype, the rich are able to protect their financial assets through capital flight. In the African archetype, the poor are helped as the real incomes in rural areas increase because of the higher export earnings induced by the real exchange rate depreciation.

- Adjustment can lead to a sharp redistribution of income from groups with low marginal propensities to save towards groups with a high marginal propensity to save.
- Trade and tax reforms that improve allocative efficiency by equalizing incentives across sectors can reduce inequality significantly, provided that governments are able to implement these revenue-neutral measures.

This paper — a product of the Trade Policy Division, Country Economics Department — was prepared as a background paper for the *1991 World Development Report*. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact the World Development Report office, room S13-060, extension 31393 (36 pages, with figures and tables).

675. Are Buybacks Back? Menu-Driven Debt-Reduction Schemes with Heterogenous Creditors

Ishac Diwan and Mark M. Spiegel

Two debt-reduction mechanisms — market buybacks and concerted debt-reduction agreements — run into coordination problems. The menu approach captures some of the advantages of both but not their inconveniences.

There is always some price that is low enough so that a debtor country gains by buying back some of its debts. Similarly, there is always some price that is high enough so that creditors gain by selling their debt claims. What is needed is a mechanism that allows trades to take place at some price within this range.

One mechanism, the market buyback, has been called a boondoggle. Market buybacks are too expensive from the debtor's point of view. Faced with a buyback bid, each creditor has incentives to hold onto its claim unless the bid is larger than the value of debt after the deal.

Concerted debt-reduction agreements can overcome this type of coordination failure, but they may be difficult to reach in practice because of the heterogeneity of creditors.

Diwan and Spiegel argue that the menu approach to debt reduction retains the advantages but not the inconvenience of buybacks and concerted agreements.

The authors introduce a model of bank asset pricing in the presence of tax incentives and deposit insurance. Through it they show that the exit price of any bank depends on the composition of the bank's asset portfolio.

They then derive the equilibrium level of exit and new money for a distribution of creditors facing a given menu program. They show that the optimal menu includes some positive level of debt repurchase in almost all cases — challenging the argument that buybacks are undesirable. The intuition for this result is that by getting the banks with the worse valuation out of the creditors' group, a rescheduling agreement at better terms can be reached with the remaining creditors.

Diwan and Spiegel conclude that the menu program dominates the standard buyback and new-money approaches. That suggests a questioning of the conventional wisdom concerning the role of buybacks and the optimal level of buyback activity.

This paper — a product of the Debt and International Finance Division, International Economics Department — is part of a larger effort in PRE to analyze the role of debt and debt service reduction for highly indebted countries. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sheilah King-Watson, room S8-040, extension 33730 (38 pages).

676. Higher Education in the Republic of Yemen: The University of Sana'a

Viswanathan Selvaratnam and Omporn L. Regel

Higher education in Yemen has reached a critical stage requiring urgent reexamination of the course of its development. Future policies should help to diversify the structure of higher education and to provide opportunities for admission to a broader group of students.

Enrollment in the University of Sana'a grew gradually from fewer than 100 students in 1970, shortly after it opened, to about 4,500 in 1979. Government policy at first tried to balance the university enrollment with the capacity of the marketplace to absorb university graduates.

University enrollment began to increase at an outstanding rate after 1985, following the heavy expansion of secondary education in the country in the late 1970s. From 1987 to 1991, total enrollment expanded from about 17,000 to 44,000 students. If the present rate of intake continues, total enrollment is projected to reach 79,000 students by the year 2000.

This explosive growth has created numerous problems, including overcrowded classrooms, insufficient staff resources, deteriorating physical plant and equipment, inadequate educational materials and equipment, and a low level of absorption of graduates into the labor force.

These developments threaten the quality of degree programs in several disciplines. The government should act immediately to develop a strategy to protect its investment in higher education. The policy should consider the country's medium- and long-term needs, the constraints on its resources, and the growing social aspirations of its people. The goal of this assessment should be to design a strategy that will make higher education a more effective investment to serve the needs of the country and to protect its resources.

This paper — a product of the Education and Employment Division, Population and Human Resources Department — is part of a larger effort in PRE to strengthen the ability of the Bank and borrowers to address the challenges in higher education. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cynthia Cristobal, room S6-035, extension 33640 (48 pages, with graphs and tables).

677. On Economic Transformation in East-Central Europe: A Historical and International Perspective

Andres Solimano

The seemingly irreversible socialist experiment in East-Central Europe came to a sudden, largely unexpected, end in the late 1980s. That collapse generated important economic and political consequences. broad historical and international perspective is needed to understand the ongoing transformation in the region.

The paper considers two periods: before socialism and after it. The former includes the 1920s, 1930s, and 1940s, and the second includes the late 1980s and early 1990s. The focus is on issues of economic reconstruction, hyperinflation, integration with the global monetary system and the functioning of the gold exchange standard, the impact of the great depression of the 1930s and its aftermath, and postwar monetary reforms. The study also compares per capita income and the structure of foreign trade of East-Central Europe with those of Western Europe and Latin America in the late 1930s and late 1980s.

Differences in per-capita income between Eastern and Western Europe widened after socialism. In 1937, before World War II and socialism, per capita income in Great Britain — then the highest in Western Europe — was 2.6 times per capita income in Czechoslovakia — then the highest in East-Central Europe. In 1988, the ratio of per capita income in West Germany — now with higher per capita income than Great Britain — to that of Czechoslovakia was 5.6. The average income per capita of Eastern Europe has moved closer to that of such Latin American countries as Argentina, Brazil, and Mexico.

Economic transformation in East-Central Europe probably will be a long and complicated process because the initial conditions for the transition to a market economy are very weak. In fact, the chief characteristics of these economies are macroeconomic imbalances, obsolete and uncompetitive productive capacities, a lack of modern infrastructure, underdeveloped factor markets, and weak institutions.

Nor is the external environmen

supportive. The disintegration of Comecon will entail large terms of trade losses for Eastern Europe vis-a-vis the Soviet Union. A massive influx of western capital is unlikely in the short to medium run. International capital markets will be reluctant to commit large amounts of credit to the region until reform is more consolidated.

On the political side, the initial euphoria over the end of the old regime is waning and people are less enthusiastic about reform because of the hardships accompanying the transition. Fragile and hanging political coalitions and the signs of some surrender to the temptations of populism clearly reflect that tendency.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a larger effort in PRE to analyze the transition from central planning to a market economy in Eastern-Central Europe. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Emily Khine, room N11-067, extension 39361 (38 pages, with tables).

678. Economic Growth: A Review of the Theoretical and Empirical Literature

David Renelt

Some countries have achieved rapid growth rates and caught up with wealthier countries while others have achieved little or no growth. Efforts to determine the reasons for these differences are an important theoretical and empirical task.

In recent years, economists have developed new models of endogenous economic growth that consider policy influences on growth and divergent outcomes among countries. These models deal with such issues as growth, the operation of financial markets, trade policy, government expenditures, and taxation.

Using the standard neoclassical growth model as a point of departure, Renelt reviewed important recent developments in growth theory. He analyzed the methodology of several endogenous growth models and examined models aimed at particular policy issues.

One reason for the success of the standard neoclassical growth model, Renelt writes, is that it provided a convenient tool for organizing data on the sources of economic growth. The model left much of the growth unexplained, however.

Cross-sectional analysis has provided some useful insights into the growth process. More direct estimation of productivity growth and production functions in developing countries along the lines suggested by existing growth accounting studies could be very useful.

Economists working in this area should target their work directly to the analysis of policy options in developing countries. More work also is necessary at the sectoral level. The new models of growth have not adequately described the issues of structural transformation and disequilibrium in factors markets. The existence of spillovers and increasing returns probably is more important in the industrial sector of developing countries. Policymaking generally will benefit from empirical results generated from more carefully constructed structural economic models.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a larger effort in PRE to analyze the policy determinants of economic growth. This research was part of the preparation of a research project "Do National Policies Affect Long-run Growth?" Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Raquel Luz, room N11-059, extension 34303 (42 pages).

679. Poverty Alleviation in Mexico

Santiago Levy

The main determinants of poverty in Mexico are macroeconomic uncertainty, an urban bias in social and infrastructure spending, and institutional arrangements and government policies in rural areas that discriminate against the poor. Benefits to the poor should be administered under a single program that simultaneously delivers food (through coupons rather than price subsidies), preventive health services, and information on hygiene, birth control, and food handling.

Among the findings is this ambitious analysis of poverty in Mexico:

Mexico's moderately poor lack some goods and services that everyone should enjoy, given Mexico's wealth. The extremely poor have so few resources as to be at risk of undernutrition and illness.

At most, 19 percent of the population is extremely poor (probably an overestimate), and extreme poverty is mostly a rural problem. The extremely poor have larger households, more children, and the highest dependency ratios.

The three main determinants of poverty are urban bias, macroeconomic uncertainty, and institutional arrangements and government policies in rural areas that discriminate against the poor. Urban bias in social and infrastructure spending reduces the rural poor's ability to increase their human capital. Macroeconomic uncertainty and stop-go cycles depress the permanent demand for unskilled labor and the steady stream of social spending. Institutional arrangements and resource allocation policies to increase agricultural output deliver substantial rents to high-income agricultural producers while depressing returns to land and the demand for unskilled rural labor, the two main assets of the rural poor.

Development policies to help the poor should focus on:

- Furthering the process of institutional reform of the incentive structure in rural areas.
- Changing the way resources are channeled to rural areas (eliminating price subsidies and increasing investment in rural roads, irrigation, extension services, and the like).
- Eliminating urban bias in social and infrastructure spending
- Bringing private costs of production in urban areas in line with social costs.

Policies to alleviate poverty must allow for the fact that the extremely poor are less able to bear risk, have higher fertility rates, have higher price and income elasticities of demand for food, and may experience more household inequality. The moderately poor, on the other hand, can migrate, can benefit from educational opportunities, and can participate more fully in the labor market.

There is a strong case for direct targeting of benefits onlt to the to the extremely poor. Such benefits should be administered under a single program that simultaneously delivers food (through coupons rather than price subsidies), preventive health services, and education about hygiene, birth control, and food preparation and conservation. Food pricing policies should be divorced from poverty considerations. A poverty program for the extremely poor should direct its efforts at reducing fertility, morbidity, undernutrition, and infant mortality.

Intertemporal, incentive, and administrative considerations all argue that the government can best help the moderately poor indirectly. This can be done through policies that increase the permanent demand for unskilled labor, returns to land, and the poor's access to education and social infrastructure.

This paper is a product of the Country Operations I Division, Country Department II, Latin America and the Caribbean Regional Office. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Margaret Stroude, room I8-155, extension 38831 (94 pages).

680. On Hunger and Public Action

Martin Ravallion

A new book on the use of public action to avoid famines and reduce chronic hunger not only prescribes things to do but also recommends new ways to think about what actions will be most effective in the future.

Ravallion's article is a commentary on a new book "Hunger and Public Action," by Jean Dreze and Amartya Sen. Ravallion compares the book's conceptual approach and policy recommendations to those of other recent writings on poverty and hunger.

Dreze and Sen advocate a very broad view of the factors determining human well-being, arguing that expanding *capabilities* for doing things of value should be the criterion for public choice.

Researchers trying to understand the causes of a particular famine or to anticipate future famines have usually concentrated on information about aggregate food availability. Some have deemed this to be the only information necessary to understand famine. A better approach, the authors argue, is to focus on the determinants of individual *entitlements* — the command of people over food and other necessities.

The study argues that government can prevent famines by protecting the entitlements of vulnerable groups. This can also have beneficial long-term effects on development.

The authors examine several successful government efforts to reduce or eliminate chronic hunger. They show how countries such as Chile, China, Costa Rica, Cuba, and Sri Lanka have used public provision to achieve the social indicators typical of richer countries.

Ravallion critically assesses the book's conceptual framework, data, and methods of analysis. He concludes that, despite some shortcomings in the book, the authors make a convincing case for a positive role for public action in famine relief and longer term alleviation of poverty and hunger. Even poor countries with limited domestic resources can participate in this kind of positive approach. Ravallion examines the implications for the role of the international community.

Famines are avoidable and it is not necessary for governments to wait for an increase in domestic aggregate food availability before they take some steps to head off famine. Governments can also act to alleviate chronic hunger and the threat of destitution without waiting for overall economic growth to solve the problem.

However, the right sort of growth can have an enormously important role in alleviating chronic hunger and facilitating public support, particularly in human resource development.

Much remains unknown about the most effective public action against hunger in specific countries. Future research on development policy should make this a high priority.

This paper — a product of the Agricultural Policies Division, Agriculture and Rural Development Department — is part of a larger effort in PRE to understand better the causes of hunger and how it can be prevented. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cicely Spooner, room N8-037, extension 30464 (38 pages).

681. Political-Economy Arguments for Uniform Tariff

Arvind Panagariya and Dani Rodrik

In recent years uniform tariffs have become increasingly popular but economists have not formulated a rationale that demonstrates their superiority to alternative tariff structures. Do strong political economy arguments exist that favor uniform tariffs?

During the 1980s the Bank aggressively promoted greater uniformity in tariffs in developing countries. The Bank's structural adjustment and trade reform programs have often recommended abolition of quantitative import restrictions and increased uniformity in tariffs.

This study by Panagariya and Rodrik is a formal analysis of some political economy arguments for uniform tariffs. They present three models in which uniform tariff rules may be adopted as a way of minimizing the welfare costs of endogenously determined tariffs.

In the first two models, tariffs are demand determined: the government is essentially unable to resist the lobbying pressure. In the third model, tariffs are supply determined in the sense that they result from the government's preference for certain sectors over others.

After examining the three models, Panagariya and Rodrik conclude that in each case it is possible for a uniform tariff regime to yield higher welfare than a regime in which tariffs can diverge across sectors.

Three different effects may exert a moderating influence on political pressure for protection under a uniform tariff structure. The first is the free-rider effect. In this case, a uniform tariff regime is likely to generate less lobbying activity than a regime under which sectoral tariffs can differ. If the politically active import-competing sectors are numerous, adoption of the uniform tariff rule will enhance economic efficiency.

The second is the input-price effect. When imported intermediate inputs are used predominantly in import-competing sectors, as is often the case in developing countries, tariff uniformity will reduce the profitability of tariffs for import-competing sectors. On the other hand, if imported inputs are used primarily in exportables, import-competing sectors will seek tariffs even more actively.

The third is the precommitment effect. Tariff uniformity increases the cost to a future government of protecting favored sectors. If these favored sectors are small, relative to national income at world prices, a precommitment to a uniform tariff is likely to enhance efficiency.

Vague references to "political-economy reasons" are not sufficient to ustify a preference for tariff uniformity. t is essential to be explicit about the logic that underlies advocacy of tariff uniformity in specific cases.

This paper — a product of the Trade Policy Division, Country Economics Department — is part of a larger effort in PRE to understand the design and implementation of tariff reform. Copies are availabe free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Karla Cabana, room N10-037, extension 37947 (29 pages, with figures).

682. Intertemporal Substitution, Risk Aversion, and Private Savings in Mexico

Patricio Arrau and Sweder van Wijnbergen

Private savings in Mexico have fallen dramatically since 1982. The drop could be linked to a substantial increase in public savings, more than to uncertainty or . eal interest rate developments.

The decline in private savings since 1982 is arguably the most important problem in high-debt countries. A reversal of the trend is essential if growth is to be restored. Understanding the determinants of private savings behavior is thus of more than academic interest.

Three factors predominate: (1) the extent of intertemporal substitution, (2) attitudes toward risk, and (3) private/ public savings interaction. These factors ie at the core of Arrau and van Wijnbergen's research. It tests the issue of debt neutrality — whether future taxes are recognized as an offset for the value of any government debt held — and the response of private savings to real interest rates and uncertainty.

The authors estimated two configurations of a joint portfolio-choice/savings model. First they included equity, domestic bonds, and flight capital. In the second configuration they eliminated flight capital.

The second configuration, which eliminated the possibility of double counting of assets, yielded substantially better, more intuitive results. Among the authors' conclusions:

• The intertemporal approach to consumption is supported by the data.

• The results imply rejection of the traditional, expected-utility approach.

• Risk aversion is significant but lower than many have argued from analysis of static versions of the Capital Asset Pricing model.

• Results on the intertemporal substitution elasticity are much weaker.

• Domestic bonds issued by the government probably are considered as part of private wealth, although significantly less than one for one, thus rejecting debt neutrality.

The results suggest that the large increase in volatility of asset returns has lowered the risk-adjusted rate of return on savings and may therefore have lowered private savings. This effect must, however, have been offset to some extent by the sharp increase in real rates of interest.The authors then suggest that some of the decline in private savings could more plausibly be related to the substantial increase in public savings that took place during the period.

This paper — a product of the Debt and International Finance Division, International Economics Department — is part of a larger effort in PRE to study the links between external and domestic finance Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sheilah King-Watson, room S8-040, extension 31047 (28 pages).

683. Vocational Schooling, Occupational Matching, and Labor Market Earnings in Israel

Shoshana Neuman and Adrian Ziderman

Case studies in the past two decades have strongly argued against vocational schooling on cost-benefit grounds but some recent studies have reached different conclusions.

Neuman and Ziderman conducted a comparative analysis of the earnings of workers in Israel who had last attended vocational schools and those who had last attended academic secondary schools before entering the labor force. Their findings suggest that Israel may provide an example of an educational system in which vocational schooling is economically effective.

Vocational schooling in Israel has proven more cost-effective than general academic training. In particular, vocational school attenders who later worked in occupations related to their course of study earned more. Their wages were up to 10 percent more a month than their peers who studied at academic secondary schools and those who attended vocational schools but found employment in occupations not related to the subjects they studied.

The results of the research in Israel reinforce similar findings in recent research on vocational schooling in the United States.

A caveat is necessary to temper the generally positive findings concerning vocational schooling in Israel. While vocational school is cost-effective compared with other forms of secondary schooling, it does not compare favorably with other forms of training for skilled trades, such as apprenticeships and factory-based vocational schools.

Another factor is the national consensus in Israel favoring education designed to equip young people for the social and cultural role of integrating the country's heterogenous, largely immigrant population. This consensus acts as a major constraint on the development of training alternatives that are the norm for youth in other countries.

The desire to meet manpower needs for development plays an important role in explaining the growth of vocational schooling in Israel. A predominant factor, however, is the effectiveness of vocational schools in integrating youth from North Africa and elsewhere in the Middle East into the mainstream of the nation's society. Many of these immigrant youngsters have low academic ability and relatively low socioeconomic status.

This paper — a product of the Education and Employment Division, Population and Human Resources Department — is part of a larger effort in PRE to develop policies to improve private and public skills training in developing countries. Copies are available free from the

World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cynthia Cristobal, room S6-214, extension 33640 (27 pages, with tables).

684. The Value of Intra-household Survey Data for Age-based Nutritional Targeting

Lawrence Haddad and Ravi Kanbur

The design of nutrition interventions can be very susceptible to the level of aggregation of available information.

Age is a good indicator for identifying at-risk population groups for interventions that focus on prevention rather than cure. But what is the ideal upper age limit for targeting interventions to minimize undernutrition?

Within the framework of upper-limit indicator targeting, Haddad and Kanbur addressed certain questions:

- How far wrong can one go using only household-level data on nutrition?
- How valuable is the extra information one gets from costlier intra-household surveys on nutrition?
- How far wrong can one go by neglecting the intra-household repercussions of nutritional interventions — for example, supplements to a child being nullified by equivalent reductions in food to the child in the home?
- How useful is it to know the calorie reallocation outcome if age is used as a targeting instrument?

Age proved to be a good indicator of undernutrition when researchers had data on individual nutrition and on the intra-household allocation of calories.

Age was *apparently* less useful as a targeting instrument when only household-level data on calorie adequacy were used. The errors in age-based targeting were therefore significant.

Food sharing rendered age *truly* less useful as a targeting instrument because of leakage within the household. Calories targeted to the younger household members end up reaching the older individuals.

This paper — a product of the Research Advisory Staff, Office of the Vice President, Development Economics — is part of a larger effort in PRE to understand the design of poverty alleviation policies. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Jane Sweeney, room S3-026, extension 31021 (29 pages, with figures and tables).

685. Children and Intra-household Inequality: A Theoretical Analysis

Ravi Kanbur

Structural models of intra-household allocation of resources must be modified to make intra-household allocation nonlinear in total household resources.

Arguing that resources within the household are not allocated according to need, several researchers have tried to model intra-household allocative behavior. Haddad and Kanbur (1990) argued that as households become better off, intra-household inequality first increases and then decreases. The behavior of intra-household inequality as household welfare improves is clearly important for policy, as interventions are often restricted to the household level — although the objective is to improve the welfare of the least-well-off individual.

Kanbur shows here that many of the tractable derivations of intra-household resource allocation are available in what might be called the "linear expenditure systems" framework.

He analyzes the relationship between intra-household inequality and total household resources for models of intra-household allocation that lead to a linear expenditure reduced form.

He then investigates three structural models:

- Household welfare maximization
- Cooperative bargaining
- A noncooperative game with children as public goods

He indicates how these models should be modified to produce reduced forms that are better represented in the evidence.

This paper — a product of the Research Advisory Staff, Office of the Vice President, Development Economics — is part of a larger effort in PRE to understand the design of poverty alleviation policies. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Jane Sweeney, room S3-026, extension 31021 (19 pages, with figures).

686. Lending for Learning: Twenty Years of World Bank Support for Basic Education

Adriaan Verspoor

Two decades of World Bank lending for education teach that flexibility, community involvement, and adaptation of programs to local conditions are some of the critical elements of successful education programs.

Verspoor traces the development of the World Bank's lending policies for education and draws lessons and recommendations from the Bank's experience.

The evolution of the Bank's policies for education lending has paralleled the evolution of priorities in the development community. When the Bank began lending for education in 1963, it concentrated on training manpower for the modern sector and limited Bank lending to general secondary education, vocational and technical education, higher education, and teacher training. As contribution of basi education to development was more widely recognized in the late 1960s, the Bank began to support primary education. And as alleviating poverty and promoting equity became priorities, the Bank began in the 1970s to expand its support for basi education — primary and nonformal education to help build up literacy, numeracy, and problem-solving skills.

The Bank's lending for primary education has supported four main objectives: expanding educational opportunities, improving instructional quality, increasing efficiency, and strengthening management in the sector. In nonformal education, Bank lending has supported the goals of developing practical skills, promoting basic literacy, and building income-generating skills.

Verspoor argues that Bank support to education has been most successful when it provides for in-depth analysis of subsectoral issues, concentrates on a few objectives, sustains its commitment to these objectives over a long period, and delegates to the borrowing country the responsibility for sectoral analysis, policy formulation, and project development and implementation.

From his review of Bank experience in supporting basic education, Verspoor draws four lessons for those who design educational development programs:

- The most important determinant

the outcome of primary education pro-grams is the quality of the implementation at the school level.

• The quality of the implementation depends on its context — and what works one place many not in another. Programs must be adapted to each location.

• Effective administration and efficient management are vital preconditions for good implementation.

• The lack of support for mechanisms to assess the outcomes of the Bank's basic education programs is the critical weakness in their design.

Verspoor makes five principal recommendations for designing education projects:

• Support the locally determined processes that drive educational development, such as school improvement, community mobilization, and the planning of schools' locations.

• Invest in the most cost-effective inputs.

• Test carefully how an investment package works in a particular setting and monitor outcomes constantly.

• Strengthen the institutional capacity for national and regional strategic planning and management, and for operation at the district and school levels.

• Design projects to allow a flexible response to a wide variety of local needs and unplanned events.

This paper — a product of the Education and Employment Division, Population, Health, and Human Resources Department — is part of a larger effort in PRE to analyze in detail the lessons of the Bank's operational experience in education. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cynthia Cristobal, room S6-214, extension 33640 (42 pages, with figures and tables).

687. Brazilian Frozen Concentrated Orange Juice: The Folly of Unfair Trade Cases

Carlos Alberto Primo Braga and Simao Davi Silber

The main effect of antidumping actions brought against Brazilian producers of frozen concentrated orange juice has been to strengthen the oligopoly-oligopsony relationship between Brazilian producers and their U.S. partners. This limits the prospects for competition in the world market for frozen concentrated orange juice.

From 1965 to 1976, the United States was a net exporter of frozen concentrated orange juice; since the 1977 freeze in Florida, it has been a net importer. In 1978, the price differential between the Florida and Brazilian concentrates exceeded the tariff wedge and the Brazilian product began to displace U.S. production and, indirectly, Florida-grown oranges.

Brazil dominates the international market for frozen concentrated orange juice. By the mid-1980s, Brazil accounted for about 80 percent of world exports of the product. Brazilian producers supplied more than 94 percent of U.S. imports of the product in the 1980s and accounted for 50 percent of sales in the U.S. market. Brazil is also the main supplier in the European Community.

The Brazilian frozen concentrated orange juice industry has been able to expand rapidly despite heavy protection in its major markets — especially the United States — and erratic changes in Brazilian policies at all levels. The dynamism of the Brazilian industry is attributable to Brazil's comparative advantage and to the series of climate shocks to Florida's orange groves.

In Brazil, the industry is largely in the hands of four large firms — who sell 80 percent of their products to a few large U.S. firms (Coca Cola, Procter & Gamble, Tropicana, Pasco, and Beatrice), at significant price rebates.

Florida orange growers, beset by import competition and climate shocks, turned to unfair trade laws for protection in the early 1980s, relying on them increasingly as a substitute for safeguard actions. Because of Brazil's interventionist trade policies, the prevailing U.S. belief was that any Brazilian industry was guilty of unfair trade practices until proven innocent.

When U.S. firms accused Brazilian producers of unfair trade, the Brazilian producers were in a bind: the imbalance between their production costs and sale prices was the result mainly of an exceptional lack of coordination among Brazilian firms struggling to secure stable input supplies. But it was seized upon by foreign producers as unfair trade. In 1986, the Brazilian industry was accused of dumping by both the United States and Australia. And unfair trade procedures in the United States, once initiated, have a high probability of resulting in an affirmative decision.

Unfair trade cases against Brazilian firms have had little direct impact on output or price levels. But apparently they promote oligopolistic coordination among Brazilian firms. To the extent that these unfair trade cases foster the market power of Brazilian frozen concentrate producers, they increase the likelihood of increased long-term welfare costs to consumers worldwide.

Unfair trade actions have had a particularly negative impact on their supposed beneficiary, the U.S. citrus industry. The antidumping cases were basically used to protect orange growers and higher-cost frozen concentrate producers at the expense of U.S. juice and soft drink processors and distributors linked by marketing arrangements to Brazilian concentrate exporters. Their effect has probably been to strengthen the oligopoly-oligopsony relationship between Brazilian producers and their U.S. partners, further hindering the prospects for competition in the world market for frozen concentrated orange juice.

This paper — a product of the Trade Policy Division, Country Economics Department — is part of a larger effort in PRE to understand the economics of the emergence of "fairness" as a standard for regulating international trade, its implications for the continued openness of the international trading system, and its continued functioning as an important vehicle for development. Copies are availabe free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Nellie T. Artis, room N10-013, extension 37947 (46 pages).

688. Macroeconomics of Public Sector Deficits: The Case of Zimbabwe

Felipe Morande and Klaus Schmidt-Hebbel

To improve growth prospects in Zimbabwe, foreign trade must be reformed and the country's high public deficits — which crowd out private consumption and private investment — must be reduced.

Zimbabwe has the uncommon combination of a high public deficit, a balanced current account, low inflation, and low levels of investment and growth.

Despite a surplus in the current account, the nonfinancial public sector has run deficits exceeding 10 percent of GDP since 1981. Inflation is low but interest rates are rising because of partial financial liberalization and rising domestic public debt stocks.

Heavy public spending crowded out private consumption and investment in the 1980s. The private saving rate is a staggering 20 percent of GDP, which finances all of Zimbabwe's investment.

The fiscal adjustment begun in 1987 helped stabilize the public debt and improved recovery of investment. But more fiscal adjustment is needed to improve macroeconomic and financial stability and growth prospects.

Public deficits must be reduced to ensure a sustainable path for public debt. High deficits are crowding out both private consumption and private investment. The public sector must be adjusted and foreign trade must be reformed to improve capital formation — a prerequisite for improving growth prospects in Zimbabwe.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a PRE series of case studies on the macroeconomics of public sector deficits. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Susheela Jonnakuty, room N11-039, extension 39074 (109 pages with figures and tables, plus 9 pages of appendix).

689. Do Tax Policies Stimulate Investment in Physical and Research and Development Capital?

Anwar Shah and John Baffes

Among tax policies designed to stimulate investments in Pakistan, the investment tax credit has not been cost-effective. But allowing full expensing for research and development costs has been.

Tax policy instruments are often used to stimulate private investment in developing countries. But researchers have not explored how well such policies have met stated policy objectives.

To evaluate the cost-effectiveness of tax incentives for industrial and technological development, Shah and Baffes specify a dynamic production structure model with endogenous capacity utilization.

Taxes and incentives are part of the user cost of capital, and thereby affect producer decisions about choice of inputs, technology, and capital accumulation.

Empirical estimates of this model allow one to infer both the impact of investment incentives and their implications for revenues foregone by the government.

The model results yield an objective, empirically derived cost-benefit ratio that is superior to standard cost-benefit analysis and King-Fullerton type marginal effective tax rate analysis.

Shah and Baffes apply this model empirically for Pakistan. The results suggest that the investment tax credit has not been effective at stimulating investments in Pakistan. The private investment stimulated has been less than the government revenues foregone.

Allowing full expensing for research and development expenditures, on the other hand, has been cost-effective.

This paper — a product of the Public Economics Division, Country Economics Department — is part of a larger effort in PRE to evaluate tax incentives for industrial and technological development. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ann Bhalla, room N10-053, extension 37699 (25 pages, with tables).

690. The Terms-of-Trade Effects from the Elimination of State Trading in Soviet-Hungarian Trade

Gabor Oblath and David Tarr

A reduction of the Soviet "subsidy" to Eastern European countries would impose greater transition costs on them just as they are attempting to make the drastic adjustments they need to move to market economies. How much of a cost will the switchover of their CMEA trade relations impose?

Economists have debated whether the Soviet Union subsidized trade with its Eastern European partners in the Council of Mutual Economic Assistance (CMEA).

Effective January 1, 1991, former CMEA members implemented the "switchover" decision to convert to wor market prices denominated in convertible currency. The switchover dramatically reduced the role of "state trading" by permitting direct enterprise to enterprise transactions denominated and settled in convertible currency.

Oblath and Tarr made an intensive study of the trading relationship between Hungary and the Soviet Union as a case study on the terms-of-trade issue.

A detailed empirical investigation prices in Soviet-Hungarian trade before and after the switchover provides some indication of the terms-of-trade loss that Hungary is likely to suffer as a result of the switchover of its trading relationship with the Soviet Union.

Based on the assumption that oil would sell at about $21 a barrel, Hungary probably will suffer an income terms-of trade loss of $1.5 billion to $2.15 billion more than double the most recently published careful estimate. In view of the volatile price of oil on world markets, however, the study estimates that for each dollar change in the world price of oil, all energy costs would change by $76 million.

Contrary to conventional wisdom, Oblath and Tarr find that the majority of Hungarian firms exporting to the Soviet Union have been disfavored by the combination of the payments mechanism, exchange rate, tax, and subsidy policies.

The experience of early 1991 suggests that a significant decline is likely to occur in Soviet imports from Hungary during the remainder of the year. A variety of problems account for the decline, many of them specific to internal conditions in the Soviet Union.

This paper — a joint product of the Trade, Finance, and Public Sector Division, Technical Department, Europe Middle East, and North Africa Regiona Office and the Socialist Economies Reform Unit, Country Economics Department — is part of a larger effort in PRE to examine the role of trade liberalization i the transition from a socialist to a market economy. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Joe Smith, room H9-071, extension 3735 (30 pages).

91. Can Debt-Reduction Policies estore Investment and Economic rowth in Highly Indebted ountries? A Macroeconomic ramework Applied to Argentina

acques Morisset

Since 1982, public and private investment rates have declined dramatically in most debtor countries. What would be the effects of debt-reduction operations for heavily indebted countries like Argentina?

Morisset devised an analytical framework to examine the implications of debt-reduction operations for the economy of a typical middle-income, heavily indebted country.

A major finding is that debt-reduction policies can succeed in restoring investment and, consequently, growth in debtor countries. Such policies combine a liquidity effect resulting from the reduction in debt service payments and an ncentive effect resulting from the debt relief.

A simulation designed to analyze the effects of debt-reduction policies in Argentina showed that a 30 percent reduction in debt had a 2.4 percent positive effect on the level of GDP in the first year and a 5.4 percent effect in the fifth year.

The model identifies various channels through which a reduction in foreign debt influences investment. Although the direct effect of debt relief on private investment is relatively weak, the indirect effects through domestic assets are strong.

The prospect of greater stability in the domestic economy increases the demand for domestic assets, particularly bank deposits. This reduces domestic interest rates and increases the supply of credit extended by the domestic financial sector. Both effects have a positive influence on productive investment.

The analysis includes a calculation of the debt-reduction and liquidity combination that maximizes Argentina's GDP. The purpose was to determine the best use of a potential loan to the country from international financial institutions.

The empirical results suggest the tentative conclusion that a Brady Initiative debt and debt service reduction operation could establish the basis for sustainable growth in Argentina, if combined with appropriate domestic policies.

This paper — a product of the Debt and International Finance Division, International Economics Department — is part of a larger effort in PRE to investigate the benefits and costs to debtor countries and their creditors of voluntary, market-based debt and debt service reduction arrangements. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sheilah King-Watson, room S8-040, extension 31047 (33 pages, with tables).

692. Health Financing in the Poor Countries: Cost Recovery or Cost Reduction?

J. Brunet-Jailly

Providing adequate health care and expanding access to care are crucial problems in many developing countries. Should governments direct their efforts to meeting existing costs through cost recovery mechanisms or should they give priority to lowering the costs before trying to recover them?

Many donor agencies, including the World Bank, have tended to view the problem of financing health care services in developing countries as a problem of cost recovery. Policy reforms based on this view have therefore focused on measures, such as user charges and insurance, intended to generate additional revenues to meet recurrent resource needs. However, the potential to actually reduce costs by eliminating waste in health systems has not been given adequate attention.

The health care situation in Mali represents a case study in the difficulties of providing effective care in poor countries. The share of health expenditures in the government's budget amounted to nearly 9 percent at the beginning of the 1970s but has fallen to about half that level since then. Households bear most of the burden of health financing, accounting for about 75 percent of total sectoral expenditures in 1986.

Revenues from user charges represent only a small fraction of operating expenditures in government health facilities. Changing the present system so that cost recovery becomes a significant proportion of actual expenditures would be extremely difficult.

However, realistic possibilities exist for reducing the costs of pharmaceuticals, which accounted for over 50 percent of total health expenditures in 1986. Brunet-Jailly's analysis shows that with improved drug management practices, Mali would not need additional external aid to make drugs available in its health units and dispensaries. This example suggests that the therapy for improving public health services should be based primarily on cost reduction, not simply cost recovery.

The conditions that govern access to health care and drugs in the poorest countries today are grossly inequitable. Only cost reduction can diminish this enormous inequity and give the poor better access to health care services. Such a focus on cost reduction is consistent with the goals of the Bamako Initiative.

This paper — a product of the Population, Health, and Nutrition Division, Population and Human Resources Department — is part of a larger study undertaken by PRE of African health policy. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Otilia Nadora, room S6-065, extension 31091 (41 pages, with figures and tables).

693. Report on Adjustment Lending II: Lessons for Eastern Europe

Vittorio Corbo

The countries of Eastern Europe have much to gain from stabilizing their economies and integrating them with the world economy. They should make trade reforms a high priority. Policymakers there should look at the recent economic history of other nations for lessons.

The Bank introduced adjustment lending in 1979 to help member countries restructure their economies to create conditions conducive to equitable growth while maintaining a sustainable balance of payments. Adjustment lending sets policy reforms as conditions of a loan.

A review of the experience of other nations with adjustment problems may provide useful knowledge for Eastern Europe as the region attempts to make the transition to market economies and to integrate with the world economy.

Reforms such as those that Eastern Europe is initiating now have little precedent in recent economic history. Evidence from other countries indicates, however, that output levels are likely to suffer in the early years of massive economic restructuring. Governments must be aware of these adjustment costs, which represent an investment in a better economic system.

If they want their investment to be highly rofitable, they must prepare a coheren ogram, hold fast to their policies, and remove impediments to factor allocation. As the credibility of the reforms increases, investment and output will respond. Recent experience in other countries suggests several constructive steps that Eastern European countries can take to ease their transition to market economies:

- Policymakers should place a high priority on dealing with high open or repressed inflation and other manifestations of severe macroeconomic imbalances such as unsustainable current account deficits or very large positive real interest rates.
- At the same time, they should remove restrictions on labor mobility and on the exit and entry of firms at the same pace as they liberalize trade. In that way, reforms can achieve an increase in output early rather than causing increasing unemployment.
- Decisionmakers should move early to create markets for working capital financing — with appropriate mechanisms to assess credit risks — in order to encourage economic restructuring. The creation of a full-fledged financial system is not urgent and should take place only after the countries have achieved economic stabilization.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a larger effort in PRE to emprove the understanding of policy reforms in Eastern Europe. Copies are available free from the World Bank, 1818 H Street NW, room N11-035, Washington, DC 20433. For Bank staff, please contact Aludia Oropesa by electronic mail (41 pages, with tables).

694. Labor Markets in an Era of Adjustment: An Overview

Susan Horton, Ravi Kanbur, and Dipak Mazumdar

This overview of a symposium on labor markets and adjustment concludes that: (1) real wages are more flexible than generally supposed, (2) labor reallocations across sectors have been more or less in the desired direction, and (3) the role of labor unions, generally supposed to be an impediment to adjustment, is more subtle than generally supposed.

Horton, Kanbur, and Mazumdar have written an overview of 19 papers in a symposium devoted to an examination of the interaction between labor markets and adjustment. The purpose of their commentary is to draw general conclusions and policy lessons and to identify areas for further research.

The papers include 7 issue papers and 12 country studies (Argentina, Brazil, Bolivia, Chile, Costa Rica, Côte d'Ivoire, Egypt, Ghana, Kenya, Korea, Malaysia, and Thailand). The country studies bring together a wealth of information that will be useful to researchers.

The evidence on real wages casts considerable doubt on theoretical concerns about aggregate real wage rigidity and labor market inflexibility as a hindrance to adjustment. Declines in real wages have been dramatic and often far greater than the fall in GDP. For some countries, the declines in real wages may have been large enough to have aggregate demand effects that inhibit recovery.

The country studies find that, by and large, sectoral employment shifts have been in the desired direction, that is, towards tradables.

In contrast to the general view of labor unions as an impediment to adjustment, the papers in this symposium present a more varied and subtle picture. Union responses to adjustment programs range from militant opposition to active cooperation. And the strength of unions need not bear any simple relation to the prospects for recovery.

While in some Latin American countries (Argentina and Brazil), unions receive the blame for lack of adjustment, in Costa Rica their presence did not prevent moderate adjustment. And in Bolivia, much labor legislation was dismantled, yet a strong recovery has not yet begun. In Africa and particularly in Asia, the studies do not see unions as major obstacles to adjustment in the aggregative sense.

The studies also discuss the consequences of labor market adjustment on income distribution, gender, and human capital. The conclusions here are less clear-cut.

The issue papers highlight complexities that point to country-specific answers. While real wage declines will worsen poverty, improvement in the rural-urban terms of trade during adjustment will have the opposite effect. Similarly, whi employment shrinkages in general are likely to affect women adversely, given their weaker attachment to labor markets, a high female-labor intensity of tradables can serve as a countervailing force.

This paper — a product of Studies and Training Design Division, Econom Development Institute — is part of larger effort in PRE to understand the behavior of labor markets in the process of structural adjustment of the economy. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Marshall Schreier, room M4-023, extension 36432 (70 pages, with figures).

695. Long Term Prospects in Eastern Europe: The Role of External Finance in an Era of Change

Ishac Diwan and Fernando Saldanha

What should the governments of Eastern Europe and the public and private institutions in the West do to promote the successful movement to a market economy?

Private investors have an important role to play in the ongoing process of reform in Eastern Europe. So external creditworthiness is crucial to a successful transition. Large government borrowing crowds out the formation of private contracts between international investors and domestic entrepreneurs and firms. Given the overall credit ceiling in international lending, the public sector needs to curtail its external borrowing to leave room for the private sector.

This also implies that public debt

reduction may be especially desirable in the highly indebted countries of Eastern Europe. Rather than flood the public sector with new loans, international organizations should attempt to improve domestic creditworthiness by supporting debt reduction and borrowing restraints during the transition period. Such a strategy would also force governments to finance their deficits internally, thereby increasing accountability.

Debt for equity swaps represent an attractive vehicle for debt reduction in the highly indebted countries of Eastern Europe. Such schemes, when tied to the privatization effort, are not inflationary – unlike the case of the public debt for rivate equity schemes of Latin America. hey simply represent a swap of public abilities, and they create value to the extent that foreign private investment leads to positive externalities. The challenge will be to create swap mechanisms that will allow the Eastern Europe countries to retain a large share of those gains.

This paper — a product of the Debt and International Finance Division, International Economics Department — is part of a larger effort in PRE to examine the effects of external finance and external debt on the process of reforms in Eastern Europe. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sheilah King-Watson, room S8-040, xtension 33730 (42 pages).

96. Macroeconomics of Public ector Deficits: The Case of Chile

orge Marshall and Klaus Schmidt-Hebbel

Chile's success suggests that fiscal stabilization is a prerequisite for structural reform — and that structural reform need not be postponed until stabilization is fully achieved.

Marshall and Schmidt-Hebbel analyze the structure of public deficits in Chile, distinguishing between consolidated nonfinancial public deficits and quasifiscal losses of the Central Bank — focusing on the determinants and sustainability of the deficits.

In the framework of an estimated portfolio model, they simulate the path of domestic inflation and interest rates for money-financed and debt-financed deficits.

Then they trace the effects of deficits, and their form of financing, on private consumption and investment — focusing on empirical estimates of the different channels through which public spending and taxation crowd in or crowd out private spending.

Finally, they measure the spillover effects from the deficit to the real exchange rate and the trade surplus.

Chile's successful experience suggests that fiscal stabilization is a prerequisite for structural reform — and that structural reform need not be postponed until stabilization is fully achieved.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of PRE's series of case studies on the macroeconomics of public sector deficits. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Susheela Jonnakuty, room N11-039, extension 39074 (99 pages).

697. Volatility Reversal from Interest Rates to the Real Exchange Rate: Financial Liberalization in Chile, 1975-82

Paul D. McNelis and Klaus Schmidt-Hebbel

Data for Chile (1975-82) indicate that liberalizing the capital accounts does not eliminate variations in the domestic interest rate but shifts them to the real exchange rate.

McNelis and Schmidt-Hebbel analyze the dynamic adjustment of the real exchange rate, the domestic interest rate, and foreign borrowing under conditions of perfect and imperfect capital mobility during financial liberalization.

Making use of a two-sector model with current and capital accounts interacting, they show that the domestic interest rate is more volatile under imperfect mobility and the real exchange rate more volatile under perfect mobility.

So liberalizing the capital accounts does not eliminate variations in the domestic interest rate but shifts them to the real exchange rate.

Studying data for Chile during the period of financial liberalization from 1975 to 1982, they found that the domestic interest rate became less volatile and less responsive to domestic variables — and more dependent on the covered international interest rate.

And the real exchange rate became more responsive to domestic wealth.

Foreign reserve holdings and net exports followed a similar pattern: the covered international rate had stronger effects on reserve changes while real wealth became more important for determining net exports.

This paper — a product of the Macroeconomic and Growth Division, Country Economics Department — is part of a larger effort in PRE to understand the role of structural reforms in macroeconomic adjustment. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Susheela Jonnakuty, room N11-039, extension 39074 (34 pages).

698. Tax Policy Options to Promote Private Capital Formation in Pakistan

Andrew Feltenstein and Anwar Shah

In Pakistan, at least, changes in corporate tax rates are probably better instruments for promoting capital formation than are increased investment tax credits. Increasing the investment tax credit stimulates more capital formation than does decreasing corporate taxes, but the tax credits also increase inflation.

Feltenstein and Shah developed a simple two-period general equilibrium model to analyze the macroeconomic impact of tax policies in Pakistan. They analyze two scenarios.

In scenario 1, the investment tax credit rate is increased from 15 percent to 30 percent. The new fiscal regime increases investment but also significantly increases inflation.

In scenario 2, the original investment tax credit rate is retained but the statutory corporate tax rate is reduced. Welfare improves more than under scenario 1.

Feltenstein and Shah conclude that in Pakistan, at least, changes in corporate tax rates are probably better instruments for promoting capital formation than are increased investment tax credits.

In particular, cuts in corporate taxes improve welfare more than do increases in investment tax credits.

Increasing the investment tax credit

stimulates more capital formation than does decreasing corporate taxes, but the ta: credits also have significant macroeconomic consequences.

This paper — a product of the Public Economics Division, Country Economics Department — is part of a series of PRE discussion papers evaluating the tax incentives for industrial and technological development. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Ann Bhalla, room N10-053, extension 37699 (27 pages).

699. Regulation and Deregulation in Industrial Countries: Some Lessons for LDCs

Ralph Bradburd and David R. Ross

How regulatory misdirection often derailed efforts to offset market failure in the United States, and the implications for policy in developing countries.

The United States experience with antitrust and with directive regulation in the rail, trucking, airline, and telephony sectors offers useful lessons for developing countries. The experience highlights the realities both of market failure and of the difficulties of implementing regulation to control it — and reveals that imperfect regulation may be no better than imperfect competition.

Antitrust measures to regulate price fixing and to require approval for mergers above some threshold level of industrial concentration are straightforward to implement and have provided some gains in economic welfare. The regulation of price discrimination, restrictive vertical practices, and predatory pricing is administratively more difficult, and the potential gains are less clearly evident. In many situations, import competition can be an efficient alternative.

Direct regulation of rail, trucking, airline, and telephony was frequently inefficient, the regulatory apparatus often lost sight of its original objectives, and the regulators were captured by the regulated. For rail and trucking regulation, the regulatory outcome probably was worse than it would have been under laissez-faire.

Bradburd and Ross recommend the following hierarchy of regulatory responses to imperfect competition in LDCs:

- First, ensure that domestic markets are open to import competition to the maximum feasible extent.
- Second, in cases of nontradables and when free access to imports is impossible, adopt streamlined antitrust policies that minimize the need for discretionary judgments.
- Third, consider direct regulation of natural monopolies as a last resort, but only in an economically important sector and only if designed to minimize the likelihood of regulatory misdirection.

This paper — a joint product of the Public Sector Management and Private Sector Development Division, Country Economics Department and the Private Sector Division, Legal Department — is part of a larger effort in PRE to explore how to strengthen the efficiency of the private sector in developing countries by redefining public and private boundaries. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ernestina Madrona, room N9-061, extension 37496 (126 pages).

700. Trade Liberalization and the Transition to a Market Economy

Oleh Havrylyshyn and David Tarr

Trade liberalization is more important to Eastern and Central European economies than to reforming nonsocialist economies — and will also benefit the reforming socialist economies more. But it must be accompanied, or quickly followed, by rapid privatization.

The fundamental issues in trade liberalization are how, how much, and how fast to liberalize. Experience outside Eastern Europe indicates that speed is important and reform should go as fast as political circumstances allow, so opposition cannot build up and reverse the process.

The real reason for speed is that a big bang automatically meets the criteria for successful reform: the credibility that derives from a comprehensive, coordinated reform package and a clearly preannounced statement of the content, schedule, and goals of the reform program. If these conditions can be met under gradual reform, gradual reform should work — but rarely is that true, and the instances of failed or partial reform are many.

Reforming socialist economies should accelerate rather than retard the pace and phasing of trade liberalization because, compared with other developing countries, these countries have:

- Far more price distortion.
- More poorly functioning or nonfunctioning factor markets.
- A more concentrated domestic production structure, with associated lack domestic competition.

Consequently, it is only through trade liberalization that a rational price structure can be achieved during the transition.

Trade and other reform will not succeed without rapid and widespread privatization. Without privatization, the resource reallocation and supply respon to trade liberalization will be less vigorous (in state-owned enterprises) and will be necessary to maintain central government checks (such as wage controls on the perverse behavior of decentraliz firms without owners.

But even if widespread privatization of large state enterprises occurs with a lag, trade liberalization should proceec rapidly for the following reasons:

- The political environment is now favorable for trade liberalization. Failure to seize the opportunity to liberalize tra might create a permanently protectec economy, as politically powerful interests are likely to emerge who will want maintain protection in their sectors.
- The supply response from small and medium-sized firms, which can privatized almost immediately, and from large private firms created by foreign direct investment — should be strong.
- Better price signals will improve resource allocation even in state-ownec enterprises.
- Trade liberalization often complements, and therefore accelerates, the p vatization process.

This paper -- a joint product of the Trade Policy Division, Country Economics Department and the Trade and Finance Division, Technical Departme Europe, Middle East, and North Africa Regional Office — is part of a larger effort in PRE to examine questions relating to the transition from a socialist to a market economy. Copies are available free from the World Bank, 1818 H Stree NW, Washington, DC 20433. Please contact Nen Castillo, room N10-033, extension 37961 (51 pages).

701. Education and Adjustment: Review of the Literature

Andrew Noss

There appears to be a causal link between adjustment and education but the nature of the link varies widely and is poorly understood. More monitoring, research, and analysis are needed.

Many recent studies evaluate the effects of adjustment on economic growth and on the poor, but few assess the specific impacts of adjustment on the education sector. Noss assesses what is known about how adjustment (particularly World Bank adjustment lending) affects education.

He concludes that reliable evidence about the effect of adjustment policies on education is limited.

Most critics of adjustment programs say little about education directly and do not distinguish the effects of adjustment measures from the effects of international recession, fiscal constraints, or structural problems. Early adjustment programs ignored education issues — but adjustment lasted longer than expected, so the Bank has broadened its approach to protect education from the negative effects of adjustment.

Relevant data are scarce and of poor quality. The most common indicators — aggregate financing and enrollment indicators — are difficult to interpret. Moreover, analyses may compare indicators between two before-and-after points but say nothing about how or why indicators change.

The effects of changes in financing on coverage, quality, and equity of education are by no means obvious. Education has a long gestation period, so the impacts of adjustment may not yet be evident. Country studies are probably the best framework for analyzing the adjustment process. The database of key education indicators must be improved.

This paper — a product of the Education and Employment Division, Population and Human Resources Department — is part of a larger effort in PRE to understand the education sector in the broader context of Bank operations, particularly adjustment programs. It is the second step in a research agenda that includes analysis of how the education sector should be treated in public expenditure reviews in the context of adjustment (see WPS 510) and of how adjustment-related operations affect the education sector. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Cynthia Cristobal, room S6-035, extension 33640 (68 pages with figures and tables).

702. Should Price Reform Proceed Gradually or in a "Big Bang?"

Sweder van Wijnbergen

In a big bang. Under gradual decontrol, speculation and hoarding create shortages which make reformist governments vulnerable to early perceptions of failure — a strong argument against gradualism in the decontrol of prices.

Should countries such as Poland or the USSR move toward more flexible prices gradually or in a "big bang?"

Why is it that governments committed to eventual price flexibility so often seem to be unable to let go of "temporary" controls?

Why, after price increases early in a program of price controls, does output often rise at the same time that shortages seem to increase?

Van Wijnbergen argues that intertemporal speculation, hoarding, and the political economy of price control help explain these puzzles.

The interaction between shortages and the political vulnerability of reformist governments to early perceptions of failure is a strong argument *against* gradualism in the decontrol of prices.

* An earlier version of this paper has been circulated under the title *Intertemporal Speculation, Shortages, and the Political Economy of Price Reform.*

This paper is a product of the Country Operations 1 (Mexico) Division, Country Department II, Latin America and the Caribbean Regional Office. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Margaret Stroude, room I8-155, extension 38831 (29 pages, with figures).

703. The Political Economy of Fiscal Policy and Inflation in Developing Countries: An Empirical Analysis

Sebastian Edwards and Guido Tabellini

Despite recent advances in understanding the macroeconomics of fiscal policy in developing countries, few studies has asked why fiscal policies differ from country to country or what institutional or legal arrangements help maintain fiscal discipline. This paper finds a positive correlation between political variables (coups, elections) and specific fiscal policy actions using a political economy approach.

Most economists treat fiscal policy as exogenous and consider policymakers as machines to be programmed. Rarely do they seek to determine why, for instance, some countries rely on the inflation tax while others use direct taxation, let alone what political factors affect such decisions. Yet without a theory of how fiscal policymakers behave, at both the revenue and the expenditure levels, there is no guarantee that policy advice will turn out to be sound.

Edwards and Tabellini present the results of an empirical analysis of the political economy of fiscal policy for a group of developing countries. They look at alternative ways of incorporating political variables into the explanation of government policy actions. Dividing their results into three sections, one each for inflation, budget deficits, and devaluations, they find that:

- The equilibrium inflation rate is higher the more citizens disagree about which party should hold office, and the more unlikely it is that the government currently in office will be reappointed.
- Political instability and polarization lead to a collective myopia that sometimes tempts policymakers to borrow too heavily and to leave the bills to their successors.
- Governments tend to implement adjustment policies — including major devaluations — early in their tenure in office, when they command political authority. But if political conflict arises, they may lack the strength to change the macroeconomic status quo and will resort instead to inflation and deficits.

Edwards and Tabellini argue that their results have important implications for the design of adjustment and stabilization programs. Institutional reforms that make it harder for a government to reverse course without warning will increase the credibility of the reforms, thereby reducing political instability — and the equilibrium level of inflation. The creation of independent central banks should also be a priority. This and other reforms that take money creation out of the hands of governments will boost macroeconomic stability

Their results serve as a general endorsement of World Bank conditionality.

This paper — a product of the Public Economics Division, Country Economics Department — is part of a larger effort in PRE to study the political economy of fiscal policies in developing countries. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ann Bh:.lla, room N10-061, extension 37699 (80 pages, with tables).

704. Costs and Finance of Higher Education in Pakistan

Rosemary Bellew and Joseph DeStefano

Available educational resources could be used more effectively by reducing the proportion of nonteaching employees — most of them servants — and by reallocating those resources to faculty and instructional materials. Pakistan's government should not allocate more resources to the sector until it has established better mechanisms for allocating resources and has established incentives and sanctions to improve institutional performance.

Using data from colleges and universities, Bellew and DeStefano investigate the costs and effectiveness of higher education in Pakistan, identify factors that influence those costs and effectiveness, and estimate levels of study subsidies.

Not surprisingly, they find that most colleges and universities are underfunded. They operate with minimal faculty, spend little cn learning materials, and cannot cut costs by enrolling more students (with current faculty levels) without jeopardizing the quality of education.

Available resources could be used more effectively by reducing the proportion of nonteaching employees — most of them servants — and by reallocating those resources to faculty and instructional materials.

Student performance in examinations is consistent with the level and use of resources. Most students fail examinations, particularly in crowded institutions that offer few courses. And those who pass do so largely through their own efforts, not because of the quality of teaching.

There are no institutional incentives for achievement or penalties for failure. Colleges and universities are not held accountable for the quality of instruction, cost recovery is low, and the government demands no standards. It would be imprudent for the Pakistani government to allocate more resources to the education sector until mechanisms have been established for more effectively allocating resources within and among institutions and for establishing incentives and sanctions that create pressure to improve institutional performance.

This paper — a product of the Education and Employment Division, Population and Human Resources Department — is part of a larger World Bank sector study on higher education in Pakistan. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Cynthia Cristobal, room S6-214, extension 33640 (57 pages, with figures and tables).

705. What Causes Differences in Achievement in Zimbabwe's Secondary Schools?

Abby Rubin Riddell and Levi Martin Nyagura

Textbooks and teachers are important in raising achievement, but more research is needed on what characteristics differentiate high-achieving schools from low-achieving schools.

Riddell and Nyagura found that students who attended high-fee-paying (trust) schools, elite urban government schools, and mission schools scored better in mathematics and English achievement than did students in the less-well-endowed government schools and those established by local councils.

Much of the variation in student achievement was attributable to the schools the student attended. Examination results were higher in schools with a high proportion of trained teachers, with a good supply of textbooks, and with a stable faculty (high teacher retention).

But once researchers control for these factors, contrary to expectations, som underendowed local council and government schools are more effective at boosting achievement than their counterparts with more resources.

So, textbooks and teachers are important in raising achievement, but more research is needed into what characteristics differentiate high-achieving schools from low-achieving schools.

This paper — commissioned by the Population and Human Resources Operations Division, Southern Africa Department, Africa Regional Office, jointly with the Education and Employment Division, Population and Human Resources Department and Zimbabwe's Ministry of Education and Culture — was prepared as a background paper for a review o primary and secondary education in Zim babwe. Copies are available free from the World Bank, 1818 H Street NW, Wash ington DC 20433. Please contact Cynthia Cristobal, room S6-214, extension 33640 (55 pages, with tables).

706. Successful Nutrition Programs in Africa: What Makes Them Work?

Eileen Kennedy

The seven factors associated with successful nutrition programs in Africa. And a call for evaluations that focus on process as well as outcomes.

Little of the literature on nutrition between 1960 and the 1980s included assessments of effective nutrition programs. In this important study, Kennedy focuses on factors associated with successful nutrition programs in Africa.

In 1989 the World Bank mailed a survey to 330 people: 110 responded, and 66 nutrition programs were identified as successes. Kennedy includes case studies for six of these (two in Mali and one each in Ghana, Nigeria, Togo, and Zaire) in the report.

Seven factors (which Kennedy discusses at length, with illustrations from the case studies) were mentioned repeatedly as important to the success of nutrition programs:

• *Community participation.* For community-based programs to be successful, even with active local involvement, some implementors suggest that there needs to be awareness and commitment of the leadership at higher levels of government.

• *Program flexibility.* Donors should commit themselves to a project long enough that approaches that don't work in certain areas can be modified.

• *Institutional structure.* It is more important to use an existing institution, even if it is not ideal, than to create a new institution. Donors are typically interested in working with the public sector, but many of the success stories had strong ties to the private sector.

• *Recovery of recurrent costs.* A contentious issue. Some respondents claimed that if cost recovery is an indicator of success, there are no success stories. The extent and depth of poverty in Africa will necessitate external financing for years to come.

• *Multifaceted program activities.* In the more effective programs, nutrition is linked to broader activities involving food security and income-generating activities.

• *Well-trained and qualified staff.* Projects cannot create the charismatic leaders associated with many successful projects but inadequate support can stifle them.

• *Infrastructure.* Programs and projects work better in areas where there is physical infrastructure and an adequate health care delivery system.

Kennedy concludes that these findings are preliminary and require further validation on the ground. If we are to understand what works, programs need to be evaluated better not only for outcomes but also for design and management.

And all evaluations — internal and external — should focus on process as well as outcomes.

This paper — a product of the Population, Health, and Nutrition Division, Population and Human Resources Department — is part of a larger effort in PRE to identify "best practices" in program implementation in the population, health, and nutrition sectors. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Otilia Nadora, room S6-065, extension 31091 (50 pages).

707. Population, Health, and Nutrition: Fiscal 1990 Sector Review

Population, Health, and Nutrition Division, Population and Human Resources Department

The population, health, and nutrition (PHN) share of total Bank lending has grown rapidly in recent years, increasing from 0.3 percent of total lending in fiscal 1987 to 4.5 percent in fiscal 1990. In addition, PHN work focuses much more on policy than it did in the past.

World Bank lending in the population, health, and nutrition (PHN) sectors increased significantly in fiscal 1990. Over the past five years, PHN lending has grown rapidly both in the number of projects and in the amounts of loans and credits. The future lending portfolio indicates continued growth. Bank support of nutrition activities, both within the PHN sectors and as components of projects outside the PHN sectors, has expanded significantly.

The content and focus of PHN lending and sector work during fiscal 1990 respond to the needs of borrowing countries and to the Bank's emphasis on human resources development and poverty, and reflects the pertinent issues that PHN sector development work poses today. PHN work now focuses much more on the policy level than it did in the past. Health financing issues continue to be rigorously addressed as a priority. The use of local consultants and the participation of beneficiaries in Bank work is on the rise. Increased attention has been focused on NGOs in recognition of the important role they play in the PHN sectors. Social sector development operations, a new feature of PHN lending, have presented challenges to the Bank because of the streamlining and coordinating of roles and responsibilities in the Bank and at the national level that they require. Efforts to raise cofinancing and coordinate aid are being intensified because of the acute shortages of resources for the sectors in many borrower countries.

The Bank still faces important challenges in its effort to improve the effectiveness of its interventions in the PHN sectors. First and most important, the Bank has not yet comprehensively addressed all facets of the population issue, which encompass full and rigorous consideration by country operations and senior management staff, as well as effective and efficient delivery of family planning services. Second, while most PHN staff appreciate the importance of addressing management and institutional development issues, the quality and depth of PHN interventions in this regard vary.

The review suggests a number of recommendations for further improving the Bank's performance in the PHN sectors. On the technical side, the Bank should (1) continue to focus and improve its interventions at the policy level; (2) address management and institutional development issues more rigorously and comprehensively through project, sector, and research work; (3) squarely address and encompass the role of the private sector and NGOs in the design and delivery of PHN interventions; and (4) continue efforts to address and resolve PHN financing issues, given its comparative advantage in this regard.

Internally the Bank should (1) address the need to expand staff to accommodate continued growth likely in Bank work in the PHN sectors and (2) encourage greater use of experts from developing countries and the participation of beneficiaries in Bank work.

Because a population strategy paper is at an advanced stage of preparation, this review withholds suggestions for improving the effectiveness of the Bank's work in the population sector.

This paper — a product of the Population, Health, and Nutrition Division, Population and Human Resources Department — is part of a larger effort in PRE to increase awareness of the lessons learned from the Bank's operational work. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Otilia Nadora, room S6-065, extension 31091 (69 pages, with tables).

708. Nongovernmental Organizations and Health Delivery in Sub-Saharan Africa

Jocelyn DeJong

This paper sets out the distinctive characteristics — both positive and negative — of NGOs as institutions for providing health care in Africa. It raises questions about environments conducive to NGO activity

and how the role of NGOs can be encouraged without sacrificing their strength in the development process.

Although nongovernmental organizations make an important contribution to health care in Sub-Saharan Africa, there has been little detailed information about their activities. And few African governments set guidelines for NGO performance or coordinate activities with them. The lack of knowledge about NGO activities and the lack of coordination and policy oversight could impede African governments in achieving the most efficient use of national resources for health — whether public, private, or nongovernmental.

DeJong reviews the historical role of NGOs in health care in Africa and discusses the economic and political forces that have combined to bring the NGOs into greater prominence and increase the funds channeled through them. She examines the advantages and the disadvantages of NGOs operating in the health sector. Some of the advantages proponents of NGOs point out are greater motivation of staff, community-based structure, small scale, a willingness to work in peripheral areas, intersectoral scope, and greater efficiency. But NGOs depend on external funding, which may not continue indefinitely, and on foreign personnel, whose generally short stints with the NGOs create problems of continuity. NGOs typically fail to document their activities, making it difficult to evaluate the activities or to build on the NGOs' experience. And differing standards of qualification for personnel pose problems in transferring personnel between NGO and government facilities.

DeJong cautions that more rigorous assessment and evaluation of NGOs' capacity is of critical importance to ensure that the funds channeled through them are used efficiently. She suggests possible policy approaches that governments could adopt to reduce the likelihood of conflict with NGOs — and ways that governments can capitalize on the strengths of NGOs to increase their contribution to the national health care system. DeJong urges NGOs to view themselves as an integral part of the national health care system, to conform to national health policies, and to do more in policymaking. Finally, she encourages donors to consider how NGOs can be more than conduits for funds — and allowed to make the most of their strengths.

This paper — a product of the Population, Health, and Nutrition Division, Population and Human Resources Department — is part of a larger study undertaken by PRE of African health policy. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Otilia Nadora, room S6-065, extension 31091 (27 pages).

709. An Empirical Macroeconomic Model for Policy Design: The Case of Chile

Luis Serven and Andres Solimano

A model focusing on the design and evaluation of macroeconomic policy is applied to Chile.

Serven and Solimano construct, estimate, and simulate a macroeconomic model for Chile. This model allows aggregate supply and demand factors to interact in determining such key economic variables as inflation, the real wage, the real exchange rate, real output and employment, and the current account balance.

The model ensures the consistency of different aggregates by imposing the relevant budget constraints on the fiscal sector, the central bank, and the balance of payments. To this consistent framework, the model adds behavioral equations with sound analytical foundations.

Serven and Solimano use model simulations to explore the effects of domestic policies and external shocks (like a balanced-budget fiscal expansion, a policy of increased growth in minimum wages, a fall in world copper prices, and an oil price shock). These simulations help illustrate the effects of economic policies and external factors that shape current policy discussions in Chile.

This paper — a product of the Macroeconomic Adjustment and Growth Division, Country Economics Department — is part of a larger effort in PRE to design applied macroeconomic models for the evaluation of macroeconomic policies. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Susheela Jonnakuty, room N11-039, extension 39074 (79 pages, with figures, graphs, and tables).

710. Urban Property Tax Reform: Guidelines and Recommendations

William Dillinger

Property taxes are a potentially attractive way to finance municipal government, but property taxes typically provide less than 20 percent of municipal revenues. Procedural, policy, and institutional reform can be achieved only in the context of the wider restructuring of local finance — because property tax carries a heavy political price.

The property tax is a potentially attractive way to give local governments access to a broad and expanding tax base. Unlike the mix of intergovernment grants and indirect taxes that now dominate municipal revenues, it can also promote broader objectives of efficiency — linking the provision of municipal services more closely to their financing, and rationing the consumption of municipal services by price.

But urban property taxes, albeit ubiquitous, typically yield less than 20 pe cent of municipal revenues.

In part, these low yields reflect failures in the administration of the tax. Many properties are missing from the tax rolls, or are inaccurately valued, and collection is extremely inefficient. There should be procedural reforms to improve coverage, the accuracy of valuation, and the efficiency of collection.

But procedural improvements alone are not enough. Tax rates must also be increased. The scope of reform must be expanded to address the systems for rate-setting and revaluation and the incentives confronting tax administrator Certain rules should apply:

- Control over tax policy (includin rate setting) should generally be assigne exclusively to the entity most directly affected by it — municipal government.
- Taxes must be indexed. To maintain the real level of tax liabilities, tax authorities must either revalue annuall (which is expensive) or increase nomina tax rates. One practical solution is to address inflation by adjusting valuations "from the office" on the basis of a common inflation indicator.
- To give the tax administration agency an incentive to perform, the agenc should be placed on a paid, contractua basis so it has a direct financial interest in tax performance.

For all its economic virtures, the property tax carries a high political price. Its effectiveness in confronting taxpayers with the cost of municipal services gives it an unusually high political profile in developing countries. As a result, where ocal authorities have access to less efficient but more politically acceptable revenue sources those tend to be exploited first.

So property tax reform can be achieved only in the context of wider restructuring of local finance. The object of such reform should be to reduce the extent of arbitrary subsidies between jurisdictions and to confront local taxpayers with the cost of services they consume.

This paper — a product of the Urban Development Division, Infrastructure and Urban Development Department — was prepared for the municipal finance component of the joint UNDP/World Bank/UNCHS Urban Management Program (UMP). This report is the first of a series of management tools to be produced by that component. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Vino David, room S10-139, extension 33734 (46 pages).

711. Financial Reform in Socialist Economies in Transition

Millard Long and Silvia B. Sagari

The restructuring of banks must be tied to the restructuring of industrial enterprises, to macroeconomic stabilization, to price reform, and to the resolution of ownership problems. These problems, which will take years to resolve, require a commitment to reform, clear ideas about what is to be achieved, and realistic expectations about the difficulties that will be encountered.

Focusing mainly on banking reform, Long and Sagari propose a model for the financial structure of a socialist economy in transition.

Such a financial system, they say, would include a few large, competitive national commercial banks. These banks would not be specialized in the sectors they serve or their type of lending. They would be commercial rather than universal banks — that is, they would not own firms or engage in securities or insurance business. However, in countries that follow the universal model, banks could be owned by holding companies that would also own other financial intermediaries but not industrial or commercial ventures.

Long and Sagari rule out greater universalization of banking at this time to limit mismanagement, fraud, risk, and losses. They prefer simpler financial intermediaries because they are easier to manage, more transparent, and easier to supervise.

Equity in the banks or bank holding companies should be widely distributed to the private sector through whatever method is selected for privatizing firms. But the banks should not be privatized (unless by sale to foreign banks) until they have been made financially solvent — by cleaning up their portfolios. For socialist economies with excessive bad debts, this means making hard decisions about the major loss-making industrial enterprises.

Bank restructuring must proceed in pace with industrial restructuring, price reform, and macroeconomic stabilization.

Fast administrative restructuring of the banks is preferable to slow restructuring, contend Long and Sagari. But once the basic structure is efficient, further changes — such as new entries, mergers, and the sale of branches — can be left to the market process.

Other measures that should be taken:

- Interest rates should be raised on the outstanding mortgages of the savings banks and on other subsidized credits to market rates.
- Central banks should absorb the huge foreign exchange losses of the foreign trade banks.
- In countries where it has not been done, new legislation and regulations should be drafted, auditing and accounting improved, supervisory procedures established, and bankers' training institutions developed.

This paper — a product of the Financial Policy and Systems Division, Country Economics Department — is part of a larger effort in PRE to analyze sector reform in socialist economies in transition. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Maria Raggambi, room N9-033, extension 37657 (19 pages).

712. Foreign Direct Investment in Developing Countries: Patterns, Policies, and Prospects

Thomas L. Brewer

Absolute flows of foreign direct investment (FDI) might increase significantly in some countries, but the developing countries' share of total world FDI flows will probably remain relatively low (about 15 percent) largely because FDI in the United States will continue at high levels. To attract more foreign direct investment, developing countries must maintain both favorable macroeconomic policies and a climate favorable to FDI.

Drawing on the findings in 11 country studies, Brewer concludes that the public policy environment for foreign direct investment (FDI) has improved in recent years. There is more appreciation of FDI's contributions (such as the transfer of technology and managerial skills, the development of export markets, and the stimulation of local entrepreneurship, competition, and innovation) and greater appreciation of the role of the private sector and private investment in development.

But to improve the flow of FDI into development, more is needed — especially changes in policies toward FDI and changes in macroeconomic policies and conditions.

Positive policy shifts have improved the climate for FDI in Korea, Mexico, and Nigeria. Continuing restrictions limit FDI flows to India, Brazil, and some of the largest developing countries. Macroeconomic conditions and policies will continue to affect FDI flows and to dominate investors' decisions, as recent experiences in Mexico and Brazil indicate.

Policy reform designed to attract investors will be only marginally effective unless accompanied by appropriate macroeconomic policies. Marginal, isolated policy changes are not enough. Investors risk estimates are highly sensitive to perceptions of change and uncertainty.

Developed countries' guarantee programs to protect their own investors against noncommercial risks associated with FDI projects in developing countries — together with other developed country promotional activities — are an important part of the policy framework that affects FDI in developing countries.

Total FDI flows to developing countries are unlikely to rise significantly in the next few years. Average flows of about SDR15 billion a year (or 1 percent of developing countries' GDP) are likely for the next three years.

Absolute flows of FDI might increase significantly in some countries but the developing countries' share of total world FDI flows will probably remain relatively low (about 15 percent) largely because FDI in the United States will continue at high levels.

This paper was completed under the supervision of Kwang W. Jun. The background paper for this report is available on request. The background volume reviewed FDI experiences of 11 developing countries in three regions: Argentina, Brazil, Colombia, and Mexico in Latin America; India, Indonesia, Malaysia, Korea, and Thailand in Asia; and Kenya and Nigeria in Africa. The main author of the background paper was Gyorgy Becsky. Other contributors were Young-Hoi Lee and Aloysius Ordu.

This paper — a product of the Debt and International Finance Division Division, International Economics Department — is part of a larger effort in PRE to assess the potential for increasing foreign direct investment in support of economic development. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Sheilah King-Watson, room S8-040, extension 31047 (58 pages).

713. The Determination of Wages in Socialist Economies: Some Microfoundations

Simon Commander and Karsten Staehr

Wages are commonly assumed to be exogenously determined in socialist economies. But wages in socialist economies have been determined by a combination of institutional and economic factors.

Commander and Staehr address the issue of how wages are determined in socialist economies.

They distinguish between different types of economic regime, in terms of how much decentralization is permitted and how extensive are market-based features or rules.

Wages are commonly assumed to be exogenously given in socialist systems, regardless of regime. Commander and Staehr show that this assumption is not warranted, given the use of incentive-based systems in these economies.

Both the classical planned economy and the partially reformed regime face the problem of motivating workers in the absence of monitoring and of such conventional penalties as unemployment. How do these regimes try to resolve the incentive problem?

In a centrally planned economy, the piece-rate mechanism is an attempt to stimulate more effort among workers. But Commander and Staehr show, using game-theoretic models, that in cooperative settings the outcome can be lower productivity than desired and that in noncooperative settings the outcome can be higher wages than warranted.

They interpret the partially reformed socialist economy as an attempt to refine the motivational structure by introducing a manager between the planner and the workers. One objective is to provide a framework in which workers and managers engage in a cooperative game to determine wages and output with the incentive structure given in effect by the planner. They show how this can yield undesired results, when managers and workers cooperate, playing a noncooperative game with the planner.

They present a preliminary treatment of an economic regime such as the one that existed in Poland after January 1990, where market-based rules almost fully predominate. Their objective is to provide coherent foundations for wage equations that can be tested empirically.

They prepare estimates for the partially reformed economies of Hungary and Poland.

Data and other limitations limit the conclusions that can be drawn. But Commander and Staehr show wages to be strongly associated with prices and rather less strongly associated with productivity. Hence, wages should not be considered fully exogenous, even if institutional and other factors indicate more exogeneity than would exist in a standard market economy.

This paper — a product of the National Economic Management Division, Economic Development Institute — is part of a larger effort in PRE to analyze the sources and dynamics of inflation in transitional socialist economies. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Olga Del Cid, room M7-047, extension 39050 (62 pages, with figures and tables).

714. Women in Forestry in India

Ravinder Kaur

Women play a much greater role in forestry in India than has previously been documented — and their involvement in forestry should be strengthened.

For projects to succeed, it is essential to document women's relationship to forests — in the context of their roles in different farming and food supply systems, domestic tasks, and income-earning activities. Such documentation would reveal ways to generate employment and income for women.

The minor forest product economy, for example, which is dominated by women, has never been the focus of government policy or a specific component of social forestry projects. Social forestry projects tend to be oriented to cash crops, which mostly benefit men.

The fuelwood and fodder crisis has focused on problems of domestic subsistence; planners have been blinded to women's equally important role in the nondomestic forest economy. Forest-based activities are often poor women's main — sometimes only — source of income, particularly where women have no property rights in land. Women who have property rights only in livestock also depend on fodder, a product of forests and common property resources. Forests also provide food, medicines, and other products useful to poor people, especially in times of famine.

The urban poor bear the brunt of the fuelwood crisis, especially as fuel prices rise. But the headloading of wood (collecting wood for sale) by rural women partly reflects their lack of jobs and income. Headloaders meet a crucial energy need but also contribute to the degradation of forests. This degradation can be reversed only by increasing biomass production and generating more jobs and income for women. Social forestry programs must be broadened to include women, watershed management, the management of common property resources, and such related enterprises as animal husbandry.

Women can and do carry out most forestry tasks, even such arduous ones as pit digging, watering, and soil work. Women involved in small-scale forest-based industries — such as bidi-rolling (indigenous leaf cigarettes) and basket-making — must be helped to improve their skills and to learn to manage the entire process from collection to processing and sale. Rights to forest produce must be more clearly delineated.

Women have successfully organized groups, reclaimed degraded land, planted forests on it, and managed forests jointly. Rights in degraded land allotted for afforestation can most easily be enforced and protected by organized women. The most important help nongovernment organizations can provide is to strengthen existing women's organizations and help build new ones. Collective organizations seem best adapted to exploit such development facilities as credit, extension advice, and access to new technology, raw materials sold in bulk, and the purchase and maintenance of labor-saving devices.

This paper — a product of the Women in Development Division, Population and Human Resources Department — is part of a larger PRE review of women and development in India. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Audrey Sloan, room S9-121, extension 35108 (78 pages, with tables).

715. Promoting Girls' and Women's Education: Lessons from the Past

Rosemary Bellew and Elizabeth M. King

One way to increase female enrollment in schools is to lower the costs of education by providing culturally appropriate facilities, scholarships, and alternative schools that offer classes in the early morning or evening. Another is to train girls and women in growth sectors of the economy and to make strong recruitment and placement efforts.

Many societies underinvest in girls' and women's education for three main reasons:

- High direct, indirect, and cultural costs.
- Too few private benefits.
- Parents' failure to consider the social benefits of education.

Research gives governments little guidance on how to raise demand for female education so Bellew and King examine what is known about which strategies worked, which failed, and which have produced mixed results or results that are difficult to interpret.

Strategies that have increased female enrollment are those that:

- Lower the costs of education by providing culturally appropriate facilities, scholarships, and alternative schools that offer classes in the early morning or evening.
- Train girls and women in growth sectors of the economy at the same time that they make strong recruitment and placement efforts.

Strategies that seem to have failed include those that distribute school uniforms and offer vocational training that is not directly linked to employment.

Too little information is available to assess the effectiveness of programmed learning, day care, home technologies, information campaigns, school meals, and the revamping of curricula and textbooks to introduce broader roles for women. More research is needed on:

- The importance parents and girls attach to the *quality* of available education when making their schooling decisions.
- Girls' and women's participation in educational programs.
- Individual, family, community, and school factors that limit girls' and women's participation and achievement.

There should also be more experiments with different approaches and more evaluation of program outcomes.

This paper — a product of the Education and Employment Division, Population and Human Resources Department — is part of a larger effort in PRE to assist the World Bank and developing countries in their efforts to incorporate females into the development process. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Cynthia Cristobal, room S6-214, extension 33640 (58 pages, with figures and tables).

716. Financing Training: Issues and Options

Christopher Dougherty and Jee-Peng Tan

The need for justifying public training programs is often under-appreciated. International experience strongly indicates that the cost-effectiveness of alternative options should be taken into account in the design of such programs.

Many policymakers have assumed that the state should play a dominant role in providing training. Dougherty and Tan set out to appraise the rationale and scope for cost-effective government intervention to mobilize resources for training. They also document international experience with alternative arrangements.

Their review indicates that the case for financial interventions and the analysis of the incidence of interventions are complex. Several factors demonstrate a need to make the analytical input into evaluations of these interventions more rigorous.

First, this analysis can reduce the risk of a misallocation of resources — a particular hazard when interventions involve subsidies that alter the effective price of training services that employers or trainees must pay.

Second, such analysis can reduce the risk of unnecessarily increasing the burden on the public purse. Rigorous inquiry about the need for an intervention, and its likely impact, may disclose that the intervention is not justified or is justified only on a smaller scale. Another outcome might be to demonstrate that intervention is justified but that it could take a nonfinancial form.

Examples of nonfinancial interventions include the exemption of apprentices from minimum wage legislation; campaigns to increase the commitment of firms to training; and pump-priming operations such as providing technical help to establish enterprise-based training programs.

Equity and social concerns provide perhaps the clearest argument for subsidizing training through general public revenue, focusing on training activities with benefits for society beyond those accruing to individual trainees. Institutions where apprenticeship and other initial training are an alternative to continued education, and a strong case exists for subsidizing those in the training stream to the same extent as their peers in general education.

In concluding, the authors note that policymakers often overlook the complementarity between basic education and later skill development. The consequence is that resources may be spent on expensive, low volume training programs when they might be used more cost-effectively and more equitably to upgrade the quality of basic education.

This paper — a product of the Education and Employment Division, Population and Human Resources Department — is part of a larger effort in PRE to examine governments' role in the financing of training programs. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cynthia Cristobal, room S6-035, extension 33640 (68 pages).

717. Does Financial Liberalization Really Improve Private Investment in Developing Countries?

Jacques Morisset

An increase in real interest rates, which is a typical element of financial reforms, does not necessarily involve a positive effect on private investment unless the authorities are careful to ensure that (1) bank deposits are closer substitutes to unproductive assets (cash, gold) and foreign assets than to capital goods, (2) the financial sector assures an efficient allocation of domestic credit, and (3) the flow of domestic credit to the private sector is not absorbed by the needs of the public sector.

Assuming that liquidity constraints exist in most developing countries, the majority of analysts believe that increasing real interest rates will raise the volume of lending and hence private investment.

Morisset, focusing on the demand for capital goods, argues that the positive effect on the domestic credit market may be offset by the negative effect of a portfolio shift from capital goods and public bonds into monetary assets. He also demonstrates that a policy of financial liberalization could increase the public sector's demand for domestic credit, thus limiting the funds available to the private sector. This crowding out does not result from a change in the government's behavior but from a shift in the portfolio of private agents. Higher demand for bank deposits reduces the private sector's willingness to hold government bonds, so the public sector must finance a given b. dget deficit with more domestic credit.

His simulations for Argentina for 1961-82 suggest that the low response of private investors to changes in interest rate policy in those 20 years was attributable not to the low values of interest elasticities but to the interaction of the mechanisms allowed for in the model, which tends to neutralize the impact of such policies.

Morisset concludes that the effect of changes in interest rate policy on the demand for capital goods is weak in Argentina — and might affect the quality of private investment more than its quantity.

This paper — a product of the Debt and International Finance Division, International Economics Department — is part of a larger effort in PRE to determine the interaction between external and domestic finance in support of investment in developing countries. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Sheilah King-Watson, room S8-045, extension 31047 (22 pages).

718. Impact of Investment Policies on German Direct Investment in Developing Countries: An Empirical Investigation

Andrea Gubitz

As experience in Germany shows, the source country's policies might influence foreign direct investment (FDI) flows as much as the host country's policies do.

Many past empirical studies of foreign direct investment (FDI) flows have been unsatisfactory because of poor data. Gubitz, using better data on German FDI, found that:

• Developing countries might attract more FDI flows by easing investment restrictions or implementing incentives — but the effect of incentives could be modest and does not justify costly subsidies.

• A source country's policy instrument (public guarantees) is an important determinant of German FDI outflows to developing countries — a factor that has been overlooked in the past.

• Industrial countries can substantially encourage their companies to invest in developing countries by offering public guarantees. And actual costs in Germany have been low, as defaults have been rare

This paper — a product of the Debt and International Finance Division, International Economics Department, in cooperation with the Kiel Institute for World Economics — is part of a larger effort in PRE to study the determinants of German foreign direct investment in developing countries. It was presented at the seventh conference of the European Association for Research in Industrial Economics held in Lisbon in September 1990. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Sheilah King-Watson, room S8-045, extension 31047 (40 pages).

719. How Trade and Economic Policies Affect Agriculture: A Framework for Analysis Applied to Tanzania and Malawi

Ramon Lopez, Ridwan Ali, and Bjorn Larsen

This general equilibrium model shows that agricultural exports are highly responsive to price incentives — and that the most effective policy instruments for expanding agricultural exports are direct export incentives and devaluation of the exchange rate.

Lopez, Ali, and Larsen provide a general equilibrium model for analyzing the mechanisms by which macroeconomic trade, price, and exchange rate policies affect agricultural export sectors. They estimate the model empirically for Tanzania and Malawi to measure the supply responses of agricultural exportables They find that:

• Agricultural exports are highly responsive to price incentives.

• The most effective policy instruments for promoting the expansion of agricultural exports are direct export incentives and devaluation of the exchange rate.

• Fiscal policies are not neutral with respect to the structure of agricultural production.

This paper is a product of the Agriculture Operations Division, Southern Africa Department, Africa Regional Office. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Manel Gunasekara, room H5-055, extension 32261 (43 pages).

720. The Outlook for Commercial Bank Lending to Sub-Saharan Africa

Ellen Johnson Sirleaf and Francis Nyirjesy

Key issues in the future of long-term commercial bank lending in Africa, constraints on increased commercial bank lending there, and special initiatives for removing those constraints and stimulating lending to Sub-Saharan Africa.

Since its peak in 1980-82, medium and long-term commercial bank lending to Sub-Saharan Africa has been declining -- partly because of many banks' perception that lending to the African market represents high risks unjustified by the available returns.

The prospects for an appreciable increase in such lending are not promising. Despite some progress under economic adjustment programs, banks are skeptical about Sub-Saharan African governments' ability and willingness to continue with reform. Many of those countries have been unable to establish creditworthiness and the ability to service commercial debt — and are saddled with debts to multilateral agencies. And in a time of tight regulation, most banks have ample opportunities in other parts of the world.

On the positive side, the portfolio lean-up that has occupied commercial banks' resources for three years should be nearing a close, making it possible for them to begin considering a resumption of lending to qualified borrowers under specified conditions.

Sirleaf and Nyirjesy examine key issues in the future of long-term commercial bank lending in Africa, identify constraints on and opportunities for increased ommercial bank lending (as perceived by some commercial U.S., European, and Japanese bankers), and suggest special initiatives for removing constraints on and stimulating lending to these Sub-Saharan African markets. Among points they make:

- Private investment and financing will not improve in the region without a satisfactory enabling environment, including an appropriate policy framework, the protection of rights and properties, and wider political participation and consensus — conditions that lead to political stability and engender confidence among private decisionmakers.
- Several steps can be taken to accelerate debt reduction through conversion mechanisms. Special funds could be created for the investment of debt, for example.
- Given the small share of African debt in most banks' portfolios and the conservative posture of those banks, a strong case can be made to the regulatory authorities to eliminate mandatory provisioning regulations as quickly as possible.
- There is scope for rethinking the way risk is allocated in facilities cofinanced by commercial banks and official agencies.
- More open attitudes toward the commitmentof export cash flows appear to be important in accelerating resumed lending, until a country has adopted an open foreign exchange regime or has achieved full convertibility. Concerns about possible distortions could best be mitigated by setting a limit on the amount of funds that can be so committed by a given country or borrower, and by improved appraisal of the underlying projects.
- Commercial banks are at a disadvantage in analyzing or projecting a developing country's creditworthiness and fear of the unknown can be particularly acute in Sub-Saharan Africa. The in-depth economic analyses of the IMF and the World Bank are the closest the international community has come to establishing an "independent audit function." These are not available to the public unless the member government authorizes their release. These authorizations should be routinely granted — at least for basic, accurate, qualitative, and quantitative macroeconomic information.

This paper — a product of the Debt and International Finance Division, International Economics Department — was prepared for the Symposium on African External Finance in the 1990s, held September 18-19, 1990, at the World Bank. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sheilah King-Watson, room S8-040, extension 31047 (46 pages, with tables).

721. The Demand for Money in Developing Countries: Assessing the Role of Financial Innovation

Patricio Arrau, José De Gregorio, Carmen Reinhart, and Peter Wickham

Financial innovation is important in determining the demand for money and its fluctuations, importance that increases with the rate of inflation.

Traditional specifications of money demand have commonly been plagued by persistent overprediction, implausible parameter estimates, and highly autocorrelated errors.

Arrau, De Gregorio, Reinhart, and Wickham argue that some of these problems stem from the failure to account for the impact of financial innovation.

They estimate money demand for ten developing countries, using various proxies for financial innovation. They also assess the relative importance of this variable.

They find that financial innovation can be better modeled as a stochastic (random-walk) trend rather than a deterministic (time) trend. Financial innovation plays an important role in determining fluctuations of the demand for money. The importance of this role increases with the rate of inflation.

This paper — a joint product of the Debt and International Finance Division, International Economics Department and the International Monetary Fund — is part of a larger effort in PRE to apply new monetary approaches to developing countries. It is also being distributed as an IMF working paper. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Sheilah King-Watson, room S8-040, extension 31047 (44 pages, with figures and tables).

722. Is Rice Becoming an Inferior Good? Food Demand in the Philippines

Merlinda D. Ingco

Improving pricing and trade policy for cereals, feed, and meat in the Philippines may be more cost-effective in improving the balance of food supply and demand than further investments in rice irrigation — particularly if wheat consumption increasingly substitutes for rice consumption.

Using time-series data, Ingco estimates a demand system model for food — including rice, corn, wheat, meat, fish, and fruits and vegetables — for the Philippines. She finds that:

- Food demand is responsive to relative price changes. Most of the other food products are particularly responsive to changes in rice prices, an important variable in agricultural policy in the Philippines. A marked change in rice prices relative to other food prices would have important policy implications because of its relatively large share in food budgets and the relatively great response of other foods to changes in rice prices.
- In particular, as wheat prices decline, wheat consumption should increase — resulting in some substitution away from rice — because wheat and rice are net substitutes.
- The demand for wheat, meat, and fruits and vegetables is more responsive to own-price changes than are the staple foodstuffs.
- Rice, corn, wheat, and meat are net substitutes. Rice, fish, and fruits and vegetables are net complements. Wheat is a net substitute for rice, corn, fish, and fruits and vegetables — but a net complement to meat (partly because of urbanization and the proliferation of fast-food outlets in recent years).
- Urbanization increases the consumption of wheat, fish, and fruits and vegetables — and slightly decreases the consumption of rice.
- Consumption of rice and wheat can be expected to grow. Per capita consumption of corn should decline slightly.
- These trends should be considered in evaluating the costs and benefits of further irrigation investments in the rice sector. An improved pricing and trade policy in the cereals, feed, and livestock-meat sectors may be more cost-effective in improving the balance of food supply and demand than more investments in rice irrigation.

This paper — a product of the International Trade Division, International Economics Department — is part of a larger effort in PRE to understand the changes in food markets in developing countries. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Pauline Kokila, room S7-040, extension 33716 (25 pages, with tables).